An Address
ON
SOME FAMOUS MEDICAL OFFICERS OF THE ARMY.

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GENTLEMEN,—The medical officers of an army appear in one of the earliest and most celebrated pieces of literature[1]—

ἰητροὶ μὲν γὰρ Ποδαλείριος ἠδὲ Μαχάων—

and Homer represents them as held in due honour at the siege of Troy[2]:—

ἰητρὸς γὰρ ἀνὴρ πολλῶν ἀντάξιος ἄλλων
ἰοὺς τ' ἐκτάμνειν ἐπί τ' ἤπια φάρμακα πάσσειν

("For a medical officer is worth many men
To cut out arrows and spread soothing remedies");

and such was their fame that Podaleirios, according to Strabo, was afterwards worshipped on Mount Dria.

The story in Arrian's *Ἀνάβασις Ἀλεξάνδρου* is worth remembering as a proof of the high esteem in which the greatest general of the Greek world held his principal medical officer. "Alexander," says Arrian, "was seized with pains in the nerves, accompanied with a sharp fever and a continual waking, insomuch that when all the rest of his physicians despaired of his life Philip the Acarnanian, in whose extraordinary skill in physic he had great confidence because of his success in the camp, was ordered to administer a draught to him. After these orders were given, while he was preparing the cup, came a letter from Parmenio to Alexander warning him to beware of Philip, for that he had heard how Philip had been bribed by Darius to poison him. Alexander having read the letter took the cup, wherein was the potion, in his hand and gave Philip the letter to read, and while he was reading he drank up the draught, the physician showing by the composure of his countenance that the medicine was inoffensive and by his intrepidity on perusing the letter that he was not conscious of any crime that he had been guilty of. He only entreated Alexander to acquiesce in his advice in what he should prescribe for the future, which if he did he would recover his health. After his disease had left him he declared his esteem for Philip by assuring him that he should always have a share in his friendship and certified to all who were present how steady an opinion he retained of their loyalty in refusing to entertain any suspicions to the contrary, as also that he could meet death with a true heroic magnanimity."[3]

You will remember that Flavius Arrianus, who was as good a general as he was a man of letters, was the pupil of Epictetus and lived in the second century of our era but that his lucid *Ἀνάβασις Ἀλεξάνδρου* is based on the contemporary records of Alexander. If our army should ever be engaged in military operations in the region of Alexander's campaigns it would be interesting if some member of your corps were in any spare moments to consider on the spot the passages of Arrian and of Plutarch which relate to the death of Alexander. The history of his illness is simple, as stated in the concise ephemerides kept by his secretaries. He was slightly unwell yet supped two nights at the house of Medius after the obsequies of his friend Hephæstion. The day after, which was June 18th, he was distinctly feverish but ate a full meal. He had a daily access of fever in the evening till the 25th, when his fever having greatly increased he became unconscious and died on the evening of June 28th, the twelfth day after he was distinctly ill. Though he kept his bed from the 19th he tried till the 25th to transact business and was carried out to assist at sacrifices and seems to have been out of bed for this purpose. He had disturbed nights and his fever increased from day to day. He was 32 years and eight months old at the time of his death.

Arrian is careful to distinguish between facts stated by later or less authentic writers and those contained in the ephemerides or royal diary. He says: "The royal diary gives us an account that he ate and drank with Medius and then retired to rest and when he awaked and had washed and refreshed himself he again supped with Medius and drank till late at night. When he retired from the banquet and had washed he ate a little and lay down because he had some symptoms of a fever. Afterwards he was carried in a chair to the temple and there sacrificed after his usual manner and this he repeated several days and when the sacrifices were performed he lay in an apartment prepared on purpose for him till the evening. In the meanwhile he issued out orders to the captains of his troops to make ready for a march in four days' time and even nominated those who should travel on foot, but those who were to go on board the fleet with him were to prepare themselves against the fifth day. After this he was carried to the river and being put on board one of his gallies was conveyed to some pleasant gardens on the other side where after he had washed he went to rest. The next day he again bathed and performed his accustomed sacrifices and held discourse with Medius, having given orders to his officers to attend him in the morning. He then supped moderately and being conveyed to bed had a continued fever upon him all that night. However, the next morning he again washed and sacrificed and ordered Nearchus and the rest of his captains to prepare for sailing the third day. The next day he washed and sacrificed as before, but this fever still continued, notwithstanding which he again called his captains to him and ordered all things to be made ready for a voyage, and, having bathed, his fever increased towards evening. The next day he was carried into a house adjacent to the bath, where he performed his usual sacrifices and once more called his chief officers about him to give orders concerning the intended voyage. The day following he was with great difficulty carried to sacrifice and, notwithstanding he grew manifestly worse, could not be restrained from sacrificing the day after that. He then commanded his chief officers to remain with him in the hall and the inferior ones to wait at the gates, and, growing still worse, he was conveyed from the hall in the garden where he then was into the palace, and his chief officers approaching near he made signs that he knew them but was not able to speak and thus he remained all that night. The day following the fever still increased and all that night and the next day continued strong and violent. And now his soldiers expressed a great desire to see their king, some doubting whether he was alive, others plainly affirming that he was dead but that his death was concealed by his bodyguards, and to such a height at last did their grief drive them that many of them forced their way through the guards and entered the royal apartment. But though the king perceived them his speech had left him; however, with much difficulty he lifted up his head and looking upon them stretched forth his hand to each of them. The same royal diary also informs us that Python, Attalus, Demophoon, Peucestas, Cleomenes, Menidas, and Seleucus tarried all night in the temple of Serapis, and having asked that god whether it would not be better for Alexander to be brought into his temple to be restored to health by him were answered by the oracle that he should not be brought, for it was best for him to continue where he was. This answer was brought back to Alexander by his friends and in a short while after, as if the oracle had pronounced that best, he died. Ptolemy and Aristobulus in their accounts of these transactions differ not much from the royal diary."

M. Littré in a very interesting essay[4] published in 1853 points out that some later tales of poisoning as a cause of the death of Alexander are not supported by the evidence which points distinctly to a natural disease and concludes that the fever was a malarial one. The history of death on the twelfth day of well-marked illness with some indication of preceding diminution of health for a further period, the evening rise of temperature going on to higher and uninterrupted fever, added to the fact that the patient did not take absolute rest in bed and did not take to bed at the beginning till absolutely compelled to do so by the

[1] Iliad, xi., 833.
[2] Iliad, xi., 514.
[3] Rooke's Arrian, London, 1729, Book i., cap. iv.
[4] De la Toxicologie dans l'Histoire et de la Mort d'Alexandre.

severity of the disease, point rather to enteric fever, increased in gravity, as we so often see it, by the patient trying to continue his occupations and terminating fatally in the third week. The remark of his contemporary and friend, Aristobulus, "that long banquets and deep drinking were none of his delights, neither did he prepare entertainments for the sake of the wine (which he did not greatly love and seldom drank much of), but to keep up a mutual amity among his friends," supports the view that the illness was enteric fever, for in a temperate man in the prime of life what other febrile disease with a progressive aggravation from the beginning to the end and with steady failure of physical strength and of mental clearness is so likely to be the cause of death in the third week?

In the United Kingdom the earliest reference to a medical officer in the field is of the same kind as the Homeric passages I have quoted and is in an ancient heroic tale called "Cath Magh Tuiredh." No copy of this tale more ancient than the fourteenth century exists, but a succession of references to its heroes is to be found in earlier manuscripts, which makes it probable that the story was extant many centuries before, as, for example, in the glossary of Cormac, Bishop of Cashel, who died in 903, and in a manuscript of the eighth century in the library of St. Gall. The story is of a four days' battle between the Firbolg and the Tuatha Dé Danann, two early tribes striving for supremacy in Ireland. The field of battle was the great plain to the north of Lough Corrib. When the hostile forces were in sight of one another, the Firbolg under their king Eochaidh Mac Erc and the Tuatha Dé Danann with their king Nuadhat, a day was given up to athletic games and the fighting began on the following morning. The weapons were swords and spears, with javelins as projectiles and shields for defence. On the third day of the fight Sreng, a warrior of the Firbolg, with his sword divided the shield of the king of the Tuatha Dé Danann and smote off his arm. Diancecht, says the story, the medical officer of the army, treated the injury and afterwards with the aid of Credne, an artificer, fitted to the wound a silver hand from which ever after the king was known as Nuadhat Airged Lamh (Nuadhat silver hand). It is worth noting that the position of Diancecht corresponds to that of Podaleirios and Machaon in the Iliad. He is a god-like hero and like some of the other great men of the conflict, has the attributes of a demi-god. In the ninth century dictionary called "Sanas Cormaic" he is given that status:—

> Diancecht: the name of the physician of Ireland, that is Dia nacécht or God of the powers, for cecht is a term for every kind of power. Diancecht, that is Deus salutis, God of health. Diancecht, then, is God of healing.[5]

It is a custom with the heralds when they have provided a family with a few illustrious ancestors at the dawn of history to pass on rapidly to the period of accurate records and precise names and dates, and I propose to follow their example and having introduced you to illustrious predecessors at the siege of Troy, in the army of Alexander, and amid the conflict of mythical races in the remotest part of these islands, to bring you at once to the reign of Queen Elizabeth and to London. In 1562 Ambrose, Earl of Warwick, was sent as governor to Havre which had been surrendered to Queen Elizabeth by the party in France led by Condé, and when in April, 1563, Condé made terms with his enemies which did not satisfy the queen, she ordered Warwick to hold the town, which he did till July 29th, 1563, when a capitulation was signed allowing him to march out with his men. Great hardships and much sickness were endured by the troops in their four months' siege and at the very end of it Warwick was struck in the leg by a bullet said to have been poisoned. The wound afterwards gave him much trouble and led 27 years later to the amputation of his leg and his death soon after the operation. William Clowes began practice as a surgeon on the Havre expedition. A plate in one of his books shows several rude illustrations of incidents of the field of battle and in the middle is engraved "the surgeon's chest." It has 36 compartments and six drawers and is obviously too large to have been carried hither and thither by the surgeon. On the inside of the lid are the bear and ragged staff surmounted by an earl's coronet, the badge of the Earl of Warwick. These are surrounded by the Garter which was sent to the commander during the siege. Clowes probably long kept this his first chest and he disapproved of smaller ones. In later days, he says, some surgeons were imperfectly equipped "with a little chirurgerie stuff in budgets and bagges being very unfit furniture to serve in Her Majestie's service." "Unfortunate and unhappy shall that soldier be that tasteth of these surgeons wants." Regiments and companies in the time of Marlborough and later often bore the names of their commanding officers. Uncle Toby was known in the army as Captain Shandy of Leven's, and it is interesting to observe, as an illustration of the growth of our army from a feudal force made up of units each equipped by its leader, that the general's badge and not the Royal arms were used on some at least of the accoutrements in this war.

At that period generals on land often became commanders at sea and the surgeons seem to have served in both forces also. In 1570 Clowes was on board a man of war. He tells of an accident and the description is interesting as it shows that he had observed that true pleurisy may be caused by an external blow, a fact of which gentleman of your corps must see many more examples than we meet with in ordinary hospital practice. He says:[6] "I will now enter into the manner and order of this cure which happened about that time when the Emperor's daughter passed the narrowe seas to marrie with Philip, King of Spayne: I serving in one of her Majesties Shippes, it chaunced then a great tempest and wind to arise, so that the waves or billowes of the sea went very loftie and high, wee riding then at an anker neere the French coast and the mariners being greatly busied about the winding up of their cables and ankers: but whether it were by some oversight or by reason of the storme and tempest I knowe not, but upon a sodaine the capsten turned about with great force and violence and did bruse and hurt divers, especially one Ralfe Cowdale the Botswaynes servant of the ship who had two of his ribbes fractured and broken by the force of the sayd blowe of one of the capsten barres, he was therewith throwne downe uppon the carriage of a great peece of ordnance, which brused him agayne in other places of his bodie: so the patient did lie as a man for dead, voyd of sense and understanding, and whether I drest him or not he sayd he did not knowe. But after he was agayne revived there followed perillous accidents, as a pleurisie, spitting of blood and great dolour and paynes."

It was, perhaps, Warwick's wound which first turned Clowes's attention to the question of whether poison could be carried into a wound by a bullet, and the case of a lieutenant, aged 36 years, wounded by a bullet made him consider the question thoroughly. He doubted the possibility, but at last a direct experiment convinced him of the fact that poison might be carried by a bullet.[7] "For not long since I being sent for to Portsmouth unto the most honourable the Earl of Sussex about the cure of Mr. Minnes, Lieftenant of the Towne, who by misfortune received a hurt in his head. In the time of my abode there I desired the master gunner of the towne that he would show me the favour as to let me see an arrow shot out of a musquet for I thought I could no way so well come to the true knowledge of my desire but by such Martiallmen as were expert and well practised in such fiery engines. So very courteously he granted my request and I asked his opinion if it were possible by his arte and skill to poison a bullet of lead. He answered that he did not know that a bullet of lead might be poisoned: and moreover he said that it was against the law of armes to shoot a poisoned shot. Againe it is present death if such shote be taken or found about an enemy." The arrow was shot out of the musket and stuck in a post and its feathers were uninjured, so Clowes concluded that poison on a bullet would be as uninjured as the feathers, and that a poisoned bullet was a possibility.

Clowes soon after settled in London and become surgeon to St. Bartholomew's Hospital in 1575 and was also surgeon to Christ's Hospital. One of his notes gives a curious example of the change in the diseases seen in London since the introduction of the potato and greater variety of diet. At Christ's Hospital "twenty or thirty children had the scurvy at a time." He treated these cases of scurvy by washing out the children's mouths with vinegar and water.

The picture of surgical operations as then performed in St. Bartholomew's Hospital is terrible, though it is clear

[5] Diancecht ainm dosaid legis na herenn i. dia nacécht, i. na cumachta. Diancécht, i.e., Deus salutis, i. slainte. Diancecht din dia nahicce. Stokes (W. S.), Three Irish Glossaries. London, 1862, p. 16.

[6] Clowes: Proved Practise, 1591, p. 154.

[7] Ibid., p. 112.

that he and his colleagues did all they could think of to lessen the sufferings of the patients. He approved of the actual cautery which was much used. "The yron is most excellent, but that is offensive to the eye and bringeth the patient to great sorowe and dread of the burning and the smart." He invented a new styptic powder which caused less pain—"Maister Gales powder which I will hereafter set downe in the booke, which powder of his was a worthie invention and better pleased the patients than the burning yrons which were I say very offensive to the eye and yet the powder wrought with extreme payne and made a very great ascher by that means the bone afterwards hath beene cut of newe agayne, as I hauve seene many times within the Hospitall of St. Bartholmewe's and so did make a very long worke or evuer they were cured: but this powder here published never causeth payne, but often bringeth with it seasonable white matter. The foresaid powder is of my collection and gathering, the which I did put first in practice in the Hospitall of Sainct Bartholmewes; as it is well known unto some of the surgions that then served there, and yet liue within this city of London who were present with me when I did first put it in practise, after the order before declared at which time there was taken off in the morning seuen legges and armes, and so by God's assistance we stayed all their fluxes of bloud without any payne unto them but only in the compression and close roulling and tendernesse of the wound excepted."

In May, 1585, he resigned his surgeoncy at St. Bartholomew's Hospital and went to the wars once more in the autumn with the force which Robert Dudley, Earl of Leicester, took to serve in the United Provinces. He was at Zutphen, where Sir Philip Sidney's memorable death took place, and he treated Mr. Cripps, lieutenant in Sir Philip Sidney's horsemen. After his return he served in the fleet which defeated the Spanish Armada and after that victory he settled in practice in London and became surgeon to Queen Elizabeth. He had a country house at Plaistow and seems to have been prosperous till his death in 1604. He wrote three books of which the best are "A prooved practise for all young Chirurgians and concerning burnings with Gunpowder," published in 1591, and "A Right frutefull and approoved Treatise for the artificial cure of that Malady called in Latin Struma," published in 1602. Both contain many cases which besides their medical interest illustrate the life of that time. He treated a man whose leg was broken by the fall of the gallery in the bear garden. Another patient had an arrow-head sticking in his leg, shot in at Mile End Green, where there was a great mustering and training up of soldiers. A third was a sailor who was with Sir Francis Drake on his last expedition and who had been wounded by an arrow shot by a South American Indian. "He reported unto me that the first beginning and cause of this fistula in his thigh was by a wound with an arrow, made of a small cane or reed, having a flint-head very curiously fastened on and feathered with two long parrot's feathers, or some such like, which the wilde savage people of Brazile and the countries neere thereunto adjoining do often poison with the juice of an herbe and useth them as their cheefest weapons of defence."

Clowes wrote in English, vigorous and colloquial; he is often prolix but rarely obscure. He uses many proverbs and denounces the irregular practitioners of his day with great vigour. He describes how he reproved such to their faces: "Then riseth out of his chare flering and gering this myraculous surgeon gloriously glittering like the Man in the Moone, with his bracelets about his armes, therein many precious Jewels and stones of Saint Vincent his Rockes, his fingers full of rings, a silver case with Instruments hanging at his girdle, and a gilt spatula sticking in his hat, with a Rose and a Crowne fixed on the same, standing upon his comparisons, and sayd unto me that he would open the wound, and if it were before my face: fore (sayd he) my business lyeth not in London but abroade in the countrie and with such persons that I cannot nor will not tarrie for you nor for no other whatsoever and now he did begin to bragge and boast as though al the keyes of knowledge did hang at his girdle." Clowes soon put him down.

George Baker and John Banester were military surgeons of that time who served with Clowes and were his friends, but their writings are less original and less racy than his.

John Woodall began his career as a military surgeon in the regiment commanded by Peregrine, Lord Willoughby, which acted in France with the army of Henry of Navarre in 1589, and he took part in the capture of Vendôme, Mons, Alençon, and Falaise. The English troops returned home after Henry's capture of Honfleur in January, 1590. Lord Willoughby, whose health was broken, remained abroad for some years and this was perhaps the reason that Woodall did so also. He travelled in Germany, France, and Poland for eight years. He also spent some time in Holland. Drugs, he discovered, were adulterated there: "Myselfe chanced in Holland into the house of a Bore (as they terme him), to lodge, who lived by making mithridate and treakell; he confessed to mee his mithridate had but nine simples in it. Hee had also pewter boxes marked so artificially as no man could discover them to be other than right Venice ones." With our modern views of the advantage of simple as opposed to complex pharmacy, we may, perhaps, hope that the Boer's mithridate with its nine simples was as likely to be useful as the true composition which contained 75 ingredients. After his return Woodall settled in Wood-street, in the city of London, and learnt much of the plague in the epidemic of 1603. He was appointed the first surgeon-general of the East India Company in 1612 and drew up sensible regulations for their surgeons and lists of instruments and remedies suitable for their chests, and in 1617 he published "The Surgion's Mate, or a Treatise discovering faithfully the due Contents of the Surgeon's Chest"; to this in 1628 he added another book, "Viaticum: being a Pathway to the Surgeon's Chest." The king raised the pay of surgeons in the army, so that a surgeon-major of the whole camp received 5*s.* a day and for his two mates or servants 4*s.* a day. "Also his Majestie alloweth to each surgeon two shillings and sixpence the day," and further the king allowed a chest worth £17 to each surgeon appointed to 250 men and the surgeon major one costing £48. This book reappeared in 1639 in a larger work called "The Surgeon's Mate." In the dedication he praises King Charles I. for improving the medical department of the army. His account of scurvy shows a good deal of knowledge of that disease and he is probably the first writer to recommend lime-juice for its treatment. The passage in which this recommendation occurs is worth quoting.[8] He is treating of the "drinkes useful in scurvy": "Watercresses, Sorrell, and Wormwood, of each one handfull, bruise them well, and boyle them in three quarts of Whey or new Milk, and adde thereto a little Sugar and Saffron, and let the sicke drink thereof as often as he will. Whey drunken of itself is very good, but better if the juyces of Scurvy-grasse, Sorrell, Coclaria, Wormwood, Watercresses, the greater or lesser sort, Brooklime, Scordium, Spoonwort, Water Jermander, or of some of them be mixed therewith, for that they are all approoved good medicines, and doubtlesse some of them are to be found in other countries and coasts as well as in England. Also, an infusion or gentle decoction of the roots of the hearb, Rhaphanus silvestris, or Horse-reddish in vineger, or mixed with beere and drunk, is exceeding good, or eaten of itself with bread. Bay-berries, and Juniper-berries are also wholesome boyled in Whey against this disease, for they open obstructions; likewise from these former hearbes may many other good compound medicines be made. And generally note, that bitter and sower medicines prevaile most to the cure of this griefe, amongst which sower medicines you have that are approved good thereto, these that follow as chiefe, juyce of Lemons, of Limes, Citrons, and oranges."

He was elected surgeon to St. Bartholomew's Hospital on Jan. 19th, 1616, and held the office till his death in September, 1643. The discoverer of the circulation of the blood was physician at that period and in a chapter on medicines and their uses under the heading "Pilulæ Cambogiæ" Woodall has an interesting reminiscence of Harvey.[9] "This Cambogia is much used in Holland and Germany and Doctor Harvey of St. Bartholomew's Hospital calleth it purging saffron and giveth it in pills *per se*."

Richard Wiseman served with the army of King Charles II. when it marched from Scotland into England up to its final defeat at Worcester, where the surgeon was taken prisoner. He is often quoted by Dr. Johnson in his dictionary for the meaning of surgical terms and his works contain many incidents of the civil war always clearly related. The history of a wound of the head is a good example.[10] "At the battle of Worcester a soldier came to us where we were dressing, with his sword in his hand, the

[8] The Surgeon's Mate. London, 1679. p. 175.

[9] The Surgeon's Mate, pp. 62 to 66.

[10] Several Chirurgical Treatises, second edition, London, 1676, p. 389.

blade broken off near the hilt, with many wounds on his head. I, seeing the hairy scalp of one side of his head hanging down his neck, went to him, and calling my friend Will. Clarke to me with a sponge to cleanse the wound we saw six pieces of the scull sticking to it: some of them were of the first table, others of both tables. Besides which there were various fissures, sedes, and some fractures with depression, made by sword, musket-stock, and &c. We freed the scalp of those bones and returned it upward so far as we judged was necessary; then cutting off what was superfluous, tacked it to the sound parts by several stitches distant from one another, leaving a space to dress the depression and greater fractures. Then we dressed up the wounds with digestives ex terebinth and &c., and where the dura mater lay bare we applied pledgits dipped in ol. ros., and to the other parts of the cranium liniment. arcei. The alarm growing hot of the enemies entering the city, I left Will. Clarke to bind it up and made my way out of the town. But this young chirurgeon being taken busied in dressing the wounded soldiers had liberty, after the heat of the fight was over, to employ his charity in dressing some of them and write me since this soldier's particular case—viz., the third day he found him pretty hearty and his wounds mattering so very much that he was necessitated to cut loose two of the stitches to give vent to it: then he dressed the penetrating wounds with mel. ros. and the cranium with lint pressed out of spir. vini. and proceeding accordingly in the cure saw the depressed and mangled bones cast off, incarn, and cicatrize with the rest. The soldier being thus cured by him made a voyage to the Indies and since that served a soldier in the Tower of London." An excellent life of this surgeon was published in 1891 by a member of your own corps, Surgeon-General Sir T. Longmore.

The battle of Worcester put an end for the time to the king's cause in the British Isles, so that the loyalty of Dr. William Petty, who in 1652 was appointed physician to the army in Ireland, cannot be called in question, especially as on the restoration the king received him and knighted him on April 11th, 1661. Sir William Petty was so distinguished a man that I should be sorry to omit him from your record, the more so as his descendant, the present Lord Lansdowne, is a statesman whose influence has been directly felt by the Royal Army Medical Corps. Petty will always be remembered as the author of the first English treatises on political economy, "Political Arithmetic," and "Several Essays in Political Arithmetic." In one of these essays he endeavours to prove that London has more people than Paris and that they are better provided for, and he uses the then state of the London hospitals as an illustration. "In the hospital of St. Bartholomew in London there was sent out and cured in the year 1685, 1764 persons, and there died out of the said hospital two hundred fifty and two. Moreover, there were sent and cured out of St. Thomas's Hospital one thousand five hundred twenty and three, and buried two hundred and nine, that is to say, there were cured in both hospitals three thousand two hundred eighty and seven, and buried out of both hospitals four hundred sixty and one, and consequently cured and buried three thousand seven hundred and forty and eight, of which number the four hundred sixty and one buried is less than an eighth part, whereas at La Charité the part that died was more than an eighth part, which shows that out of the most poor and wretched hospitals of London there died fewer in proportion than out of the best in Paris."[11]

The most ancient office in your department of surgical practice is the king's serjeant-surgeoncy. It is a duty of the king's serjeant-surgeon to attend the sovereign on the field of battle. The distinguished surgeon who at present holds this office has shown his readiness to take part in the labour and hardships of a campaign and has also, as we all know, by the skilful practice of his art preserved the King's life in a situation not less dangerous than many hazards of the field, but Sir Frederick Treves has not had the chance of discharging the original military service of a serjeant-surgeon since the exigencies of affairs have not called our sovereign into battle for a long time. John Ranby, who was appointed serjeant-surgeon to King George II., was present with that king at the battle of Dettingen in 1743. His Majesty dismounting from a restive horse fought on foot and his son, the Duke of Cumberland, was severely wounded. In a little treatise on gunshot wounds Ranby describes the duke's case.[12] A grape-shot from a cannon went through the calf of his leg and the orifices of entrance and of exit of the shot were each as big as a hen's egg. The wound did well and there was no subsequent stiffness.

It would be easy to draw from the annals of your corps many more interesting histories or valuable observations of disease or of wounds and we might spend a long time in the consideration of its representatives throughout the years of the war in the Peninsula, on the field of Waterloo, and in relation to the marches, the battles, the sieges, and the epidemics of India, in every climate and under every condition of success and of disaster, but I have only time to mention two more of its famous men, one a regimental surgeon and the other a physician to the army.

George Cleghorn, a native of Scotland and a graduate of Edinburgh, was appointed surgeon to the 22nd Regiment of Foot in 1736. The regiment was stationed in Minorca and remained there till 1749. Cleghorn occupied his spare time in writing "Observations on the Epidemical Diseases in Minorca from the year 1744 to 1749." Four editions of this excellent book appeared in the author's lifetime. It is full of original observations and deserves a permanent place in English medical libraries. He gives a thorough account of the physical geography, climate, agriculture, botany, and zoology of the island. He describes the natives and their habits of life and observes what customs described in Theocritus, Virgil, and Lucretius were still maintained in Minorca. He goes on to relate the diseases which he had observed and gives an account of diseases which were clearly enteric fever complicated with tertian ague, with pneumonia, and with dysentery and keeps strictly to what he had observed at the bedside. He took the temperature with a thermometer, a rare proceeding in his period, and notes that in cases of epidemic pleuro-pneumonia it was raised to 102° or even 104° F. 21 patients died from this epidemic and he examined 14 post mortem and gives a full account of the morbid appearances. Cleghorn's complete and accurate account of the natural history, physical conditions, and pathology of Minorca is valuable in itself and is further of use as an example of a kind of work which a medical officer of the army may do for any particular station with great advantage to medical knowledge in general. After he left the army he settled in Dublin where he became professor of anatomy in the university. He died in 1789.

Richard Brocklesby, who in 1758 was appointed physician to the army, was born in 1723 at Minehead in Somersetshire but was sent to school in Ireland. The school to which he was sent was kept at Ballitore, co. Kildare, by Abraham Shackleton and Brocklesby had been there seven years when a boy entered who was destined to make the school and its master for ever remembered; this was Edmund Burke. The friendship which grew up between him and Brocklesby lasted for life and when Brocklesby settled in practice in London he enjoyed the friendship of both Burke and Johnson and lived in the most illustrious circle known in the history of our literature. He was both generous and learned. In July, 1788, he wrote to Burke giving him £1000 and said he would be happy to repeat the gift "every year till your merit be rewarded as it ought to be at court." He was generous in the same way to Johnson, and Boswell tells "as an instance of extraordinary liberality of friendship he told us that Dr. Brocklesby had on that occasion offered him a hundred a year for his life. A grateful tear started into his eye as he spoke this in a faltering tone." He gave to the College of Physicians a splendid copy of the 25 volumes of the great collection on classical antiquities known as the "Thesaurus" of Grævius and Gronovius, and generosity with him was a constant habit and not an occasional impulse. He wrote an interesting little book on the regular use of music in medicine. It probably became the subject of his thoughts through a story he heard in Edinburgh of a Jacobite gentleman who lost two sons and was himself wounded in the rising of 1715 and who fell into a melancholy accompanied by fever till his physician cheered him by making a Highland harper play to him every day. His most valuable book was published in 1764, "Œconomical and Medical Observations in Two Parts." This book laid down for the first time sound principles of hygiene for the army.

There were then few barracks and most of them were very ill-arranged buildings. Brocklesby shows that the soldiers

[11] Sir William Petty: Several Essays in Political Arithmetic. London, 1699, p. 94.

[12] John Ranby: The Method of Treating Gunshot Wounds; London, 1781, p. 45.

must have plenty of air in their rooms if they are to remain healthy. He draws up proper regulations for field hospitals and thinks that the doctor ought to be supreme in the hospital, which was not then the case. His observations on diseases of camps are lucid and original and all he says on treatment is full of good sense. There was a tendency at that time to appoint men with but little knowledge of medicine and Brocklesby dwells on the importance to the army of that part of our profession with which physicians are principally concerned:[12] "That the business of every regimental practitioner is at all times much more the subject of medical consideration and of cool reflection, than of mechanical dexterity in dressing, or even in cutting off a limb, will appear to the meanest capacity, who stands informed of the following fact, well vouched to me by a very ingenious and worthy man, who was seven years surgeon to a regiment in the late war, during which, the corps had been two campaigns upon very hard service, and had also sustained the severest shocks and losses which attended the tedious siege of the Havana. Yet the surgeon declares, that in full seven years, he had never met with near 100 properly chirurgical cases in the whole regiment; though in that course of time near 2000 men had gone through the regimental books, including about 400 draughted out of it into different corps. May we not then justly conclude, that in time of profound peace, the exigencies of chirurgical dexterity, compared to the objects of medical attention, in any regiment, are at most, one half less than they had been observed in two battles and one siege, besides, the rest of the seven years: consequently, that the medical science requisite for a regiment, is at least forty times necessary to be in some sort practised, for once that any particular dexterity in manual operations, or surgery is required."

There is no need at the present day to insist on this contention of Brocklesby. The more enlightened conditions of medical education give to every practitioner sufficient knowledge of medicine and of pathology to interest him for life in all diseases and their treatment as well as in injuries and operations. When you remember that in an ordinary epidemic of enteric fever there is a percentage of deaths five times as great as that of the killed in the battle of Waterloo and that enteric fever is a common incident of a campaign, or if you open the medical report of the civil war in the United States and learn that on the side of the North alone 50,000 men died from dysentery, you need no further arguments to prove that the highest attainments in medicine will find abundant employment in the army whether in war or in peace.

Brocklesby's mind was stored with learning and his conversation was such as was worthy of an associate of Burke and of Johnson. Johnson objected to the practice of making puns in which Burke now and then indulged. One of them was on Brocklesby's name, and I mention it as a pleasant example of the familiar relation existing between the physician and his illustrious schoolfellow. There was in their time a quack doctor in London called Dr. Rock. Burke by accident or out of mischief one day called Brocklesby Dr. Rock, and when Brocklesby remonstrated Burke said that he would prove algebraically that Rock was Brocklesby's true name. "Brock minus B equals Rock, and what is that but Brock less b?" Brocklesby was physician to Dr. Johnson and attended him in his last illness. Two incidents of this attendance are related by Boswell.

"About eight or ten days before his death, when Dr. Brocklesby paid him his morning visit he seemed very low and desponding and said: 'I have been as a dying man all night.' He then emphatically broke out in the words of Shakespeare:—

> 'Canst thou not minister to a mind diseased;
> Pluck from the memory a rooted sorrow;
> Raze out the written troubles of the brain;
> And, with some sweet oblivious antidote,
> Cleanse the stuff'd bosom of that perilous stuff,
> Which weighs upon the heart?'

To which Dr. Brocklesby readily answered from the same great poet:—

> 'Therein the patient
> Must minister to himself.'

Johnson expressed himself much satisfied with the application.

On another day after this, when talking on the subject of prayer, Dr. Brocklesby repeated from Juvenal:—

> 'Orandum est, ut sit mens sana in corpore sano,'

and so on to the end of the tenth satire, but in running quickly over he happened in the line,

> 'Qui spatium vitæ extremum inter munera ponat,'

it to pronounce 'supremum' for 'extremum,' at which Johnson's critical ear instantly took offence and discoursing vehemently on the unmetrical effect of such a relapse he showed himself as full as ever of the spirit of the grammarian."

Brocklesby died on Dec. 11th, 1797, and left his house, pictures, books, and a considerable fortune to his great nephew, Thomas Young, to whom he had always shown much kindness and who deserved it, for while a student of about 20 years at St. Bartholomew's Hospital he wrote so original a memoir on sight that he was elected a Fellow of the Royal Society and in after life he became famous as the originator of the undulatory theory of light and the earliest interpreter of the Egyptian hieroglyphics. Thus was Brocklesby useful and happy in his life and fortunate in his friendships. To have been the benefactor of three such men as Burke, Johnson, and Young, to have shared their conversation, and to have enjoyed their esteem is perhaps the highest distinction which has ever been attained by any member of the Army Medical Service.

Such were a few of the many celebrated men of your branch of our profession. It would be easy to tell of many more whose lives or whose writings deserve attention and remembrance, and it is an interesting circumstance that the first lectureship in the history of medicine in the United Kingdom has recently been founded to commemorate a very learned and worthy man who began his professional life in the Indian branch of the military medical service, Dr. Thomas Fitz-Patrick.

The study of the past in medicine is more than a mere archæological pursuit; it ought to be so used as to be of present service to its student. The observations of every man who has stated to the best of his ability what he saw are of permanent value; of the same kind of use, in fact, as the reports of living cases. A part of the method of diagnosis is the weighing of the circumstances of a history, and where these are clearly stated the exercise is useful though the patient is not himself before us. This is what may be called the practical value of a study of the medical writings of past times. They are instructive, too, as warning us how easy it is to be misled as to what we are looking at, or touching, by some preconceived hypothesis. This is a lesson which cannot be too often inculcated; everyone engaged in practice knows how often the impression conveyed to him beforehand may mislead him in diagnosis by inducing him to attach too much weight to one fact or too little weight to some other, though both have been observed by himself. The habit of precise consideration of every observation and of rigid logical deduction from our observations can only be acquired in medicine and when acquired can only be retained by constant exercise in every possible direction, and it is as a part of this training that the perusal and consideration of the cases of past times are important to everyone engaged in the practice of medicine and surgery. Besides this use the knowledge of the work done, the difficulties surmounted, and the discoveries made by our predecessors in science and in practice elevates the tone of our professional life, and urges us to be worthy associates in history of those who have added to knowledge and been constant in duty.

[12] Brocklesby: Œconomical and Medical Observations. London, 1764, p. 47.

SOUTHEND-ON-SEA AND DISTRICT MEDICAL SOCIETY.—The second annual meeting of this society, postponed from October, was held on Feb. 10th. The following officers were elected: President, Dr. A. Clough Waters, J.P.; vice-president, Mr. G. F. Jones; committee, Mr. C. H. Wade, Mr. H. Cleveland Smith, and Dr. A. Grosvenor Hinks; honorary secretary, Mr. J. B. Maxwell. The following gentlemen were elected honorary members: Dr. T. Outterson Wood and Mr. C. W. Mansell Moullin.—An address was then given by Mr. Mansell Moullin on Gastric Ulcer from a Surgical Point of View and Hints when to Operate in Appendicitis.—A discussion followed, in which the following gentlemen took part: the President, Dr. J. T. C. Nash, Dr. C. Forsyth, and Dr. A. G. Hinks.—The members afterwards dined together at the Queen's Hotel, the President being in the chair. About 30 members and guests were present.

An Address

ON

GASTRO-ENTEROSTOMY AND ITS USES, WITH A DESCRIPTION OF THE OPERATION AS PERFORMED BY THE AUTHOR.

Delivered before the Oxford Medical Society on Nov. 14th, 1902.

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,
VICE-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MR. PRESIDENT AND GENTLEMEN,—It is only 21 years ago since Nicoladini first suggested the possibility of making an anastomosis between the stomach and small intestine so as to short-circuit obstruction at the pylorus. At that time, and for some years later, so little confidence was placed in this and similar operations on the stomach that patients, as a rule, were treated medically until almost moribund before being handed over to the surgeon, with the result that the mortality was appalling. This naturally retarded progress, since the deaths following on operations in moribund cases were mistaken for deaths due to the operation itself; and when we take into account the fact that out of 35 cases in which gastro-enterostomy was performed between the years 1881 and 1885 there were only 12 recoveries—in other words, that the mortality was 65·71 per cent.—it is not to be wondered at that little confidence was placed in surgical methods. It rather reminds one of the beginnings of ovariotomy, in which the mortality was still higher, and it accounts for the prejudice against recommending surgical treatment that existed for many years among physicians and that still exists among many of the older practitioners and in some of the more conservative schools. Even when I gave the Hunterian lectures on the Surgery of the Stomach at the Royal College of Surgeons of England in 1899, out of 1978 cases of gastro-enterostomy that I was able to collect from all sources there had been a mortality of 36·4 per cent.—not a very encouraging outlook when one patient out of every 2·75 might be expected to die. It is, however, a very different tale that I am able to tell to-day, only three years later, when I can point to a considerable series of cases with a mortality of under 5 per cent. This—I venture to think will be granted—brings the operation within the realm of comparative safety, and seeing that it has to be undertaken in many cases for diseases that would be otherwise inevitably fatal, it may be looked on as an operation the benefits of which not even the most conservative among us can afford to ignore.

These changes have been brought about, not only by patients being operated on at an earlier stage and under more favourable conditions—for many of my patients have been extremely ill at the time of operation—but also by greater care in technical details, by greater expedition in operating, by more careful asepsis, by the avoidance of, or greater care in the use of, irritating antiseptics, by the prevention or better treatment of shock, by care in post-operative treatment such as early feeding subsequently to the operation, and by the careful preparation of the patient before the operation.

I will endeavour in the time placed at my disposal this evening to point out in detail the methods which I employ and to illustrate my remarks by a description of a few of the cases on which I have operated.

The preparation of the patient.—It has been the custom with many surgeons to put patients suffering from disease of the stomach through a long course of preliminary treatment, such as frequent lavage of the stomach and abstention from food before operation. This, as a rule, is quite unnecessary and certainly inadvisable in the greater number of cases—first, because the treatment is depressing and debilitating in the case of patients already exhausted by a long illness; secondly, as proved by Dr. Harvey Cushing's bacteriological investigations, the stomach contents speedily become aseptic if the mouth be cleansed and aseptic foods administered; and, thirdly, as proved by ample clinical experience, elaborate preliminary treatment is unnecessary to success. If the stomach is greatly dilated and the contents are foul then lavage with simple boiled water night and morning is adopted for two days before operation. The careful cleansing of the mouth and teeth and the administration of foods sterilised by boiling are advisable. The last light meal is given the night before about 12 hours, the stomach is washed out about two hours, and a nutrient enema is given about one hour, before operation. In other cases no lavage is adopted, but the same care is exercised in cleansing the mouth, giving sterilised food, and administering a nutrient enema consisting of one ounce of brandy, one ounce of liquid peptonoids, and ten ounces of normal saline solution. Every patient is enveloped in a suit of cotton-wool made by the nurse out of gamgee tissue and each has an injection of liquor strychniæ (B.P.) administered subcutaneously before the operation is begun. The preparation of the skin and other aseptic details of the operation differ in no respect from those observed in operations generally.

Although the operation of gastro-enterostomy has been performed in many different ways there are practically only two distinct methods—one Wolfler's, in which the jejunum is fixed to the anterior stomach wall, and the other von Hacker's, in which the anastomosis is effected between the jejunum and the posterior wall of the stomach. From a somewhat extensive experience of the two I have no hesitation in strongly recommending the posterior where that operation is possible, for it must be granted that there are some exceptional cases where on account of adhesions to the pancreas, involvement of the posterior wall of the stomach by growth, or from congenital deformity the anterior method must be selected.

In August I did two consecutive gastro-enterostomies in middle-aged men in which the posterior operation was impracticable. In one, extensive ulceration had fixed the stomach to the structures lying behind it so that there was no free posterior stomach wall; in another extensive cancerous infiltration and adhesions prevented the stomach from being lifted up. In October I also had to perform the anterior operation because of a congenital deformity in the shape of a very short transverse mesocolon.

My preference for the posterior operation, whilst at first based on theoretical considerations, has been supported by ample practical experience of its advantages, and the smooth recovery with absence of pain and vomiting that one is accustomed to witness leads me strongly to advocate the method. It affords free drainage of the stomach into the bowel and secures exact apposition by posture of the newly joined structures; hence there is little or no discomfort subsequently to operation and feeding may be begun quite early. Moreover, as there is no loop of bowel constricting the colon there is no fear of obstruction, and owing to the unimpeded passage of the bowel contents, that distressing complication, regurgitant vomiting of bile, is, as a rule, avoided. In the practice of some surgeons this complication has followed so frequently that they have considerably modified Wolfler's operation in order to avoid it. In one of these modified operations an anastomosis is made between the afferent and efferent loops of jejunum; in another the loop of bowel is divided, the distal end being fixed to the stomach opening and the proximal end being inserted into the distal several inches away from the stomach. These methods are certainly effectual, but as a routine practice they are unnecessary, and as they prolong the operation they must necessarily add to the risk.

The following is a description of the operation which I am in the habit of performing. The abdomen is opened by an incision about four inches long, one inch to the right of the middle line, above the umbilicus. The stomach is thus exposed. The jejunum is readily found by turning the omentum and transverse colon upwards, and feeling for its commencement on the left side of the second lumbar vertebra. A point about 13 inches from the commencement is chosen for the anastomosis in the anterior and one from six to nine inches for the posterior operation. A loop is drawn out, milked until empty, and clamped with special forceps with long rubber-covered blades, care being taken that the proximal end of the loop is towards the cardiac end of the stomach. The union of the viscera can be effected outside the abdomen, a long piece of gauze being packed round to isolate the operation area. In the anterior operation the point selected on the stomach for the union is near the pylorus and as close to the greater curvature as possible. After the suture of the two orifices is complete a few additional stitches are introduced into the proximal end of the loop, securing it at a higher level on the stomach wall and also into the distal end, securing it at a

lower level in order to obviate kinking. In the posterior operation the transverse colon and great omentum are pulled upwards, exposing the under surface of the transverse mesocolon. A small slit is made in this and enlarged with the fingers, care being taken to avoid the wounding of any vessel. This, in case of adhesions on the posterior wall of the stomach, is sometimes simplified by passing the finger into the lesser peritoneal cavity through a thin place in the great omentum just below the stomach, the finger so introduced being used to press forward the transverse mesocolon where it is free from adhesions. The posterior wall of the stomach is thus exposed and the portion which is to be sutured is drawn through the slit in the transverse mesocolon and clamped by the long slightly curved blades of a special pair of forceps covered with rubber so as to avoid crushing the stomach wall. The lateral margins of the incision in the transverse mesocolon may be stitched on each side to the stomach by a single suture in order to prevent closure of the slit and consequent narrowing of the jejunum as noticed by Czerny, though this is not necessary when the bobbin is employed. The union of the viscera may be effected in both anterior and posterior operations in one of three ways—(1) by simple suture; (2) by my decalcified bone bobbin; and (3) by a Murphy button. The suture employed in (1) and (2) is practically the same. The bobbin is used as a splint upon which the stitches are applied. By its use an immediately patent opening of a known size is secured and the bobbin is digested within 48 hours after it has effected its purpose. Murphy's button is generally used only when the greatest haste is desirable. As the stitching in either of the two former methods can be done in from four to eight minutes by practised hands the button is rarely, if ever, necessary. Mikulicz regularly employs it and speaks well of it, and many other surgeons prefer its use to all other methods. If, however, its one advantage, rapidity, is negatived by the operator having accustomed himself to the details of simple suture the button can only be harmful and it is a well-recognised fact that it very frequently falls back into the stomach and is there retained. Now, although it may do no harm in some cases, yet it cannot be desirable, especially in an ulcerated stomach, to have a hard foreign body permanently retained in its cavity.

Method of stitching.—The stomach and intestine being placed in apposition, a continuous Lembert stitch of spun celluloid thread unites the serous surface for a distance of two inches or more. The line of this stitch is semi-oval and joins the surfaces of the viscera close to the posterior border of the anastomotic opening. Incisions are then made into the viscera in front of the suture. A second continuous suture is now passed uniting the posterior cut edges; this may take only the mucous membrane or all the coats and is of catgut. After completing the posterior half the bobbin is introduced. The anterior semi-circles of stitches are now continued, first the catgut circle to the cut edges and then the celluloid circle to the serous coats, in precisely the same fashion as the posterior sutures were applied. If the bobbin is used the sutures are drawn firmly on to it in tying. If not, the stitch must be interrupted at one point or more in order to prevent the suture "drawing" and puckering the orifice.

Removal of mucous membrane.—Chlumskij, in reporting from the clinic of Mikulicz the results of gastro-enterostomy in which the simple suture had been used, found that in all, the opening was not of adequate size. This lessening in the size of the opening may be due either to cicatricial contraction or to thickening and pouting of the mucous membrane at the orifice. Kelling[1] states that the chief advantage of the Murphy button over simple suture is the prevention of the formation of a ring of mucous membrane which projects into the stomach and occludes the new opening. To avoid this it will be found helpful to remove a small portion of the mucous membrane of each viscus. This may be done in the following manner. When incising the gut the serous and subserous layer are cut through carefully. The mucous membrane then bulges into the wound, is seized with nibbed forceps, loosened on each side from the submucous coat, and an ellipse of it as long as the wound and three-quarters of an inch broad is cut away. This procedure has given satisfactory results but it is not necessary when using the bobbin. The clamps and gauze are now removed and the viscera are carefully replaced in position, after which the abdomen is closed by a continuous catgut suture which first unites the peritoneum and posterior rectus sheath together and the same suture returning unites the anterior sheath of the rectus. The skin is brought together with a continuous catgut suture or with several interrupted silkworm gut or green chromic catgut sutures.

Special complications that may follow the operation of gastro-enterostomy.—1. Regurgitant vomiting has been very much more frequently observed in malignant than in simple disease. The cause of it is difficult to determine. In some cases, as in those of Mikulicz, it is apparently due to spur-formation at the new orifice, of such a kind as to determine the flow of the intestinal contents into the stomach rather than in the reverse direction. At times the vomiting is trivial, occurring but once or twice; at times again it is most serious and hastens or determines death. It may be dealt with most satisfactorily by lavage of the stomach, by propping the patient in the semi-erect posture, by abstinence from feeding by the mouth, and by securing a free action of the bowels; occasionally it will be relieved by allowing the patient to drink freely of milk or some other fluid. The vomit in the beginning is in appearance chiefly composed of bile and it is to the presence of bile in the stomach that the vomiting was attributed. Riegel, Malbranc, and Weil have related cases where a reflux of bile into the stomach resulted in grave symptoms. Billroth remarked upon the serious import of the regurgitation of bile after gastro-enterostomy. Claude Bernard and others, founding their opinion upon laboratory work, considered that bile inhibited gastric digestion. Dastre, in dogs with gastric fistulæ, introduced bile at all stages of digestion and concluded that the alkalinising effect of the bile was swiftly negatived by a copious outflow of gastric juice. No ill effects were noticed either in the digestive powers or in the general health. Oddi, experimenting upon dogs, obliterated the common bile-duct and united the gall-bladder into the stomach. All the bile consequently flowed at once into the stomach, with the result that the animals gained in weight and suffered not at all. Max Wickhoff, Angelberger, and Terrier have performed cholecysto-gastrostomy successfully for obstruction in the common bile-duct. These observations all show that the mere presence of bile alone is insufficient to induce vomiting. Chlumskij has suggested that it is the presence of pancreatic juice which so irritates the stomach as to make it reject all fluids. But this cause is negatived by Stendel's experiments upon dogs and by Moynihan's case,[2] in which, owing to a complete severance of the gut at the duodeno-jejunal junction, the duodenum was stitched up completely and the open end of the jejunum was implanted in the anterior wall of the stomach. In this case all the bile and all the pancreatic juice passed into the stomach, yet digestion was active and complete and vomiting was absent. Moreover, Hartmann and Soupault have recently shown that in all cases of gastro-enterostomy, whether anterior or posterior, there is a reflux of bile and of pancreatic juice into the stomach; Carle and Fantino, Hayem, Mathieu and others, have made the same observation. The cause, then, of regurgitant vomiting is not fully understood. My own view is that regurgitant vomiting is dependent on obstruction to the passage onwards of the intestinal contents either due to kinking or paralysis of the anastomosed jejunal loop or later to adhesions interfering with the regular vermicular contraction of the bowels. The case related below seems to me to prove the hypothesis.

CASE 1.—A single woman, aged 28 years, was sent to me by Dr. W.—— on Dec. 12th, 1901, with a history of pain after food and vomiting of three years' duration, the weight having diminished from nine stones to six stones. When I saw her she could only take sips of milk and water and had constant epigastric pain. There was also coffee-ground vomit. The outline of the stomach on distension with CO_2 was hour-glass in shape and there was marked epigastric tenderness. After a gastro-enterostomy she lost her pain and gained weight, but three months later I had a letter to say that she had daily vomiting of bile in large quantity and though she could take food it did not nourish her. In June the regurgitant vomiting was so troublesome that I admitted her to Leeds Infirmary for observation and after a few days opened the abdomen to find a band of lymph passing from the transverse mesocolon across the distal loop of jejunum and so constricting it as to produce obstruction. The fistula between the stomach and jejunum was fully patent and had

[1] Archiv für Klinische Chirurgie, Band lxii.

[2] Brit. Med. Jour., May, 1901.

not contracted in the least. The constricting band was divided and in order to make the result more certain the two arms of the jejunal loop were connected by a bone bobbin about three inches away from the stomach fistula. Recovery was uninterrupted, the vomiting ceased entirely, and she returned home within the month well and able to take normal food. The improvement has continued and the patient is now well.

Several "complementary operations" have been suggested in order to prevent regurgitant vomiting. Roux and Doyen cut the intestine across, implant the distal end into the stomach and the proximal into the side of the distal, and thus avoid the "circulus vitiosus." Jaboulay, Braun, and Weir advise a side-to-side approximation of the proximal and distal loops.

2. Subsequent contraction of the new orifice between the stomach and intestine must occur to some extent in all cases when the dilatation of the stomach present at the operation undergoes progressive diminution. Moynihan has recorded one case in which he performed a second operation because of closure of the orifice made with the help of Laplace's forceps and has operated upon another in which a colleague had three years previously performed gastro-jejunostomy with the aid of Murphy's button. In this latter case the opening had completely closed. Czerny records a case where the Murphy button was used in which the opening narrowed from a diameter of five centimetres to eight millimetres. As bearing on the closure of an anastomotic opening I have found the opening in a cholecyst-enterostomy made by a Murphy button to be closed three months later. My colleague, Mr. W. H. Brown, related[3] a case of closure of an anastomotic opening in which Senn's plates were used in a woman, 62 years of age, for pyloric stenosis due to tumour, a recurrence of symptoms occurring a fortnight after the original operation. An exploration through a gastrotomy incision showed the opening to be closed by a membrane which the operator tore through with his finger, the ultimate result being excellent. After the employment of my bone bobbin I have never known the opening to close and in cases where months or years later I have had an opportunity of examining the site of the former operation I have always found the opening to be thoroughly patent and the passage through it to be smoothly lined with mucous membrane.

3. Pneumonia or pleurisy is said to have followed operations on the stomach with greater frequency than other operations on the abdomen, the reason given being the fixation of the ribs and the consequent difficulty in expanding the lungs subsequently to operation. My experience does not bear out this, for I have not found chest ailments to follow after operations on the stomach with greater frequency than is the case after any other major operation.

4. Cases of peptic ulcer in the jejunum after gastro-enterostomy are recorded by Braun, Halm, Kausch, Korte, Steinthal, Hadra, and Neumann. In four cases the ulcer perforated and proved fatal. All the operations were performed when hyperchlorhydria was marked and persistent. Under such conditions Neumann suggests that the operation of jejunostomy should be performed. The opening made in the bowel can be closed as soon as the gastric juice has returned to its normal condition.[4]

5. Adhesions subsequent to gastro-enterostomy causing intestinal obstruction are probably uncommon, but Case 1 shows that they must be taken into account occasionally.

6. A want of union in the newly joined viscera is an accident of a very serious and probably almost universally fatal character that used to be less rare when only moribund patients were operated on, but which is now seldom seen except when the Murphy button has been used, in which case there is nothing to prevent extravasation if union be delayed beyond the first few days, whereas when the union is effected by a double line of sutures delayed union if not too prolonged is not serious. I have only seen the complication on one occasion in recent years and that was after the use of the metal button. Dr. W. Mayo in a paper in the *Annals of Surgery* for August, 1902, speaks of having had two fatal cases from separation of the anastomotic openings, one on the seventh day in malignant disease and one on the ninth day following an epileptic seizure; in both the Murphy button had been employed.

7. Passage of small intestine through the loop formed by the junction of the jejunum and stomach is probably only possible, certainly only probable, after the anterior operation, and the only case that I know of was one reported by Dr. Mayo in the paper referred to which occurred in his hands a year after an anterior gastro-enterostomy.

Conditions subsequent to operation.—Fantino[5] examined Carle's cases of gastro-enterostomy as regards the following points: (1) changes in the peristalsis of the stomach; (2) the ability or non-ability of the new sphincters to close the outlet; (3) the capacity of the stomach; and (4) the secretion of hydrochloric acid.

In the cases examined the operation immediately improved the peristaltic power of the stomach, though it did not render it normal. The stomach could generally empty itself, but did so gradually. Systematic examinations of the stomach contents were made after test-meals, &c., and showed that after an irregular period the stomach regained completely its power of emptying itself; in fact, as a rule, after gastro-enterostomy the stomach would be found practically empty in from three to five hours after a meal. Generally it was found that the stomach decreased in size soon after gastro-enterostomy, so that the formerly distended organ became normal in size. Examination of the stomach by mean of distension with carbonic acid and by other methods showed that a sphincter was developed at the new opening and that its power increased with time. The secretion of hydrochloric acid after operation was studied. In cases where there was formerly hyperacidity this condition was lost, and though the degree of acidity in an individual case varied from time to time, yet these variations did not depart from physiological limits. In the same examinations it was found that regurgitation of bile into the stomach took place, but it was of no importance so long as the outlet from the organ was sufficient. Cases of hypo- and an-acidity showed no change in their gastric juice after operation, showing clearly that this condition is not dependent on obstruction but on previous changes in the mucous membranes, these changes being probably in the nature of an atrophy of the peptogastric glands.

Changes in the stomach.—If dilatation as the result of obstruction has been present before the gastro-enterostomy a certain lessening in the size of the stomach may be expected to occur as soon as a fresh outlet is formed. The extent of this lessening depends entirely upon the condition of the muscular tunic of the stomach. If the stomach has dilated gradually during many months or years and if the dilatation has been extreme there will be little or no rebound—the dilatation will undergo little or no perceptible diminution. On the other hand, if dilatation has been rapid in its oncoming and has never attained a supreme degree the return to the normal size of the stomach will be almost, or wholly, complete. In cancer of the stomach or in injury resulting from swallowing acids, &c., where the latter conditions are fulfilled, the stomach rapidly lessens in size after operation; in simple stenosis, where the former conditions are found, the return is always trivial if, indeed, there be any lessening at all. The motor insufficiency of the stomach is, according to Hartmann and Soupault, a permanent matter. A return to the normal was never observed in any of their cases, even when the examination was made after one year. Gastric digestion is prolonged beyond the normal limits. Mintz and Rosenheim have shown that there is a marked delay in the evacuation of the stomach contents. Carle and Fantino, on the other hand, assert that the emptying of the stomach after a full meal is not only accomplished within the period of physiological limit but is actually accelerated. They add: "This is often observed immediately after the operation and almost, or almost always, in the months that follow."

When the stomach is very largely dilated and the duodenum is mobile it is possible to short-circuit the pylorus by uniting the stomach to the duodenum. The operation was suggested by Jaboulay in 1892 and has been performed by several surgeons with success. It can be performed with very little disturbance or exposure of viscera, but where the pyloric region is extensively diseased or adherent the operation is impracticable. The advantages claimed for it are that the new orifice or outlet from the stomach is near its natural place and that being placed above the biliary papilla there is no danger of regurgitation of bile. The incisions into the viscera are both vertical and any one of the three methods of union can be employed. I

[3] THE LANCET, July 7th, 1900, p. 10.
[4] Deutsche Zeitschrift für Chirurgie, 1901.
[5] Archiv für Klinische Chirurgie, Band xlvi., S. 1 and 2.

have found the bone bobbin in this position to be quite simple of application.

The different indications for gastro-enterostomy cannot be stated in one category, for while in the first series the indications with certain provisos are absolute so soon as the diagnosis is established, in the second series the indications for the operation apply only after failure of general treatment. In the first series are—(1) simple stenosis of the pylorus; (2) malignant stenosis of the pylorus; (3) congenital stenosis; (4) congenital atresia; (5) chronic gastric ulcer with tumour of doubtful character too extensive or adherent for effectual removal, not necessarily associated with stenosis; (6) duodenal cancer or tumour causing obstructive symptoms; (7) hour-glass contraction of the stomach not favourable for gastroplasty; (8) perigastritis with adhesions around the pylorus producing obstructive symptoms or pain and too extensive for gastrolysis; and (9) dilatation of the stomach dependent on pressure outside the pylorus from tumour of pancreas, liver, or gall-bladder incapable of removal. In the second series after failure of medical treatment are—(10) acute or chronic gastric ulcer; (11) duodenal ulcer; (12) hæmorrhage from gastric or duodenal ulcer; (13) persistent spasm of pylorus or Reichmann's disease with dilatation of the stomach; (14) hyperchlorhydria; (15) persistent gastralgia; (16) tetany of gastric origin; (17) acute gastric dilatation not yielding to lavage and general treatment; (18) pancreatitis secondary to gastric ulcer; (19) certain cases of jaundice dependent on gastric or duodenal ulcer leading to thickening around the common bile-duct; and (20) simple atonic dilatation of the stomach after failure of lavage and general treatment. Although I have performed gastro-enterostomy for nearly all the conditions here mentioned and could give numerous examples in illustration, yet it is clearly impracticable in one lecture to do more than to refer briefly to some of the indications.

1. In cases of pyloric stenosis leading to dilatation of the stomach gastro-enterostomy provides a new opening for the passage of the stomach contents and thus saves the patient from starvation and death. If the stenosis be due to simple ulcer and the pylorus is free from adhesions the question will arise as to whether pyloroplasty should be performed, for it can be done quickly with very little exposure of viscera and I have myself performed it on many occasions with excellent results; but the fact that occasionally contraction of the new orifice occurs, especially if there is active ulceration going on at the time of operation, has led me to favour gastro-enterostomy. The following case serves as an example of relapse following on pyloroplasty for stenosis with subsequent success by gastro-enterostomy.

CASE 2.—The patient, a married woman, aged 29 years, was seen with Dr. S—— on March 9th, 1895. A history was given of pain in the epigastrium for ten years with exacerbations and so-called spasms two or three times a week, the attacks lasting from two to 24 hours and being relieved by vomiting. Severe tetanic cramps in the legs were complained of and there was obstinate constipation. The stomach was markedly dilated, but no tumour could be felt. The right rectus was rigid, and tenderness was well marked over the pyloric region and towards the left costal margin. There had been a loss of weight to the extent of two stones and the patient was unable to perform her household duties. Operation was performed on Nov. 22nd. The pylorus was found to be stenosed and surrounded by adhesions. The adhesions were separated and pyloroplasty was performed, the patient making a good recovery and gaining weight and strength. She was seen in July of the following year, when, though there was some complaint of indigestion, the vomiting had not recurred and she was half a stone heavier than when operated on in November. After this date the symptoms of obstruction at the pylorus returned, and on Sept. 4th, 1898, gastro-enterostomy was performed. A good recovery ensued and the patient has remained well, having fully regained her lost weight and strength, and being now, four years later, in good health.

The following three out of many similar cases are good examples of simple pyloric stenosis treated by gastro-enterostomy.

CASE 3.—The patient, a man aged 45 years, was seen at the Leeds Infirmary. He had suffered pain for two years, with vomiting for nine months. Great dilatation of the stomach was present. There were thickening and puckering near the pylorus. On June 12th, 1900, exploratory gastrotomy was performed. A large chronic ulcer was discovered on the posterior wall as well as cicatricial stenosis of the pylorus. Posterior gastro-enterostomy was performed. Complete restoration to health resulted and the patient was well in 1901.

CASE 4.—The patient, a man, aged 28 years (who was seen with Dr. G——), was suffering from pyloric ulcer with tumour of the pylorus. Two years previously his weight was 12 stones 12 pounds; now it was 9 stones 6 pounds. He had pain two hours after food. For the last two months vomiting had been present on an average five times a week, and on two occasions the vomit was like coffee-grounds. There was enormous dilatation of the stomach. The pyloric tumour was freely moveable. There was visible peristalsis. Operation was performed on August 4th, 1899. A large mass was found at the pylorus which was evidently thickening due to active ulceration. The glands were large but not matted. Gastro-enterostomy was performed on the 27th. The patient made a good recovery and weighed 9 stones 7 pounds. On Sept. 20th, 1899, his weight was 10 stones 13 pounds. He could eat anything. He was well when seen in 1901.

CASE 5.—The patient, a married woman, aged 38 years, who was seen with Dr. M——, had suffered from indigestion for 20 years. The pain was constant; lately it was present one and a half hours after taking food; it was easier when lying down. She had lost 1 stone 11 pounds in weight. Posterior gastro-enterostomy was performed on Jan. 8th, 1901. Scars of ulcers were found on the pylorus and the anterior stomach wall. Stenosis of the pylorus was present as well as enlarged glands in the lesser omentum. Recovery ensued. Her weight was 6 stones 11 pounds at the time of operation; two months later it was 7 stones 9 pounds. She was quite well and of normal weight when she was seen in October, 1902.

2. The following cases serve to illustrate the beneficial effects of gastro-enterostomy in malignant stenosis of the pylorus incapable of removal, and I would take this opportunity of stating that I differ *in toto* from the opinion expressed lately by an eminent London surgeon, who said: "It is very doubtful if there is ever sufficient benefit to be derived from gastro-enterostomy and other short-circuiting operations in malignant disease to make it worth while undergoing these operations." Needless to say, wherever the glands are not extensively involved or there are no secondary growths the tumour should be completely removed. In this class of case it might be expected that the mortality would be much higher than in simple disease and in my first series of cases that was so, but later experience with the improved operation shows the immediate results to be almost equal to those of simple stenosis.

CASE 6.—The patient was a married woman, aged 37 years, who was seen with Dr. D——. Cancer of the body of the stomach and pylorus with dilatation was diagnosed. Gastro-enterostomy was performed on Dec. 21st, 1899. She made a good recovery and was so well that gastrectomy was advised, but cancer of the uterus supervened and prevented further operation. She lived for nine months in comfort and was able to take ordinary food.

CASE 7.—The patient, a man, aged 63 years, had symptoms for five years—at first those of chronic ulcer, later those of malignant ulcer with tumour associated with hæmatemesis. Gastro-enterostomy was performed on March 22nd, 1901. He made a good recovery. He returned home at the end of the month and gained 4 pounds in weight during the fourth week. He ultimately gained about 2 stones and lived for a time in great comfort, but the growth progressed and he succumbed to exhaustion about a year later, having been able to enjoy life for some months.

The following is an example of cancer of the stomach where the patient was too ill for gastrectomy in which a rapidly performed gastro-enterostomy gave such relief that a subsequent radical operation was well borne.

CASE 8.—The patient, a man, aged 63 years, was seen with Dr. G—— of Burnley for stomachic symptoms of a year's duration, a tumour having been noticed for a month. Gastro-enterostomy was performed on Nov. 15th, 1900. A central ring of cancer was found dividing the stomach into two cavities. The patient was too ill to bear gastrectomy. A good recovery was made with a rapid gain in weight and strength, so that on Dec. 20th the complete removal of the growth by gastrectomy was well borne and when last heard of a year later he was at work and in good health.

CASE 9.—The patient was a single woman, aged 24 years. A history was given of ulcer of the stomach with frequent

vomiting for five years, the vomit of late being coffee-ground in character. Great emaciation was present. She had been confined to bed for some months. Her weight was only 4 stones 5 pounds. The vomit contained free HCl, with blood and sarcinæ. A tumour in the epigastrium could be easily felt and seen. Posterior gastro-enterostomy was performed on April 17th, 1902. The tumour was adherent and presented every appearance of cancer; the anterior wall of the stomach was extensively involved, the glands being largely affected. The patient made a good recovery with a rapid gain in weight. Her medical adviser told me in October that the tumour had apparently disappeared and that she had gained 5 stones, thus more than doubling her weight within six months of the operation. It remains to be seen if this is a case that should come under simple tumour simulating cancer.

3. A degree of congenital stenosis is doubtless a frequent, though often an unrecognised, cause of dilatation of the stomach in young adults. Maier* recites a number of cases, mostly in adults, of chronic catarrh of the gastric mucous membrane with dilatation in which stenosis of the pylorus varying from three millimetres to one centimetre (the normal being from one to three centimetres) was found. This form of stenosis may explain many of the cases of dilatation and catarrh of the stomach coming on in young adults without apparent cause and it may also explain many of the cases of persistent vomiting set down to a vicious habit or to hysteria. To judge from the literature of the subject this condition is not of frequent occurrence, but it may be more common than is supposed, as necropsies are not frequently made in the case of children dying out of hospital and persistent vomiting in infants is not a very uncommon event. The first successful operation in an infant was recorded by Abel in 1899, the patient being eight weeks old. Several other cases have since been reported. In February, 1900, I operated on a young man, aged 24 years, for dilatation of the stomach in which the stenosis of the pylorus was probably a congenital defect, for the indigestion had existed since childhood, though much worse during the five years previous to my seeing him, yet there was no history of ulcer or other trouble to account for it and at the time of operation the pylorus would barely admit the tip of the little finger.

4. Congenital atresia of the pylorus, in which no passage exists between the stomach and intestine, is a defect which in all recorded cases has run a rapidly fatal course. If diagnosed early it should be treated by gastro-enterostomy.

5. In chronic gastric ulcer with tumour of doubtful character too extensive or adherent for effectual removal. I have operated on quite a number of cases in which after a long history of stomach symptoms a tumour had developed which on external examination presented every appearance and the feel of cancer, and even when the abdomen was opened the tumour gave the same impressions, but any enlarged glands were discrete and there were usually adhesions which precluded any attempt at removal. The following cases serve to illustrate what I mean and to show that in some of these cases where merely temporary relief only was anticipated complete and permanent cure resulted from the operation.

CASE 10.—The patient was a man, aged 31 years, who was seen with Dr. B—— and Dr. W——. He had had dyspepsia for 17 years; this had been more severe during the last 20 months. 16 months previously vomiting began and from the outset large quantities were ejected but never contained blood. There was recurrence occasionally of similar attacks which were always relieved by treatment. In December, 1897, the stomach reached to the pubes and visible peristalsis was present. Relief followed dieting and lavage until March, 1898, since which time the pain had been almost constant. The pain was not materially worse after food or relieved by vomiting. A loss of weight occurred from 10 stones to 8 stones 6½ pounds. There was great feebleness. Gastro-enterostomy was performed on May 6th, 1898. A large irregular tumour was found at the pylorus and along the lesser curvature with extensive adhesions, but the glands, though large, were discrete. A good recovery was made, followed by relief of all the symptoms. When the patient left the home on June 7th his weight was 8 stones; on August 17th, 1898, it was 9 stones 3 pounds. The following is an extract from a letter received from the patient dated Feb. 12th, 1900: "My health continues perfect. I have not lost a day's work through illness since I recovered." He was in good health in 1902.

CASE 11.—The patient, a man, aged 45 years, gave a history of pain for two years about an hour after food, with great loss of flesh. For nine months he had vomited every day or every second day a large quantity of yeasty material, but no blood, though he was very anæmic. There were well-marked signs of dilatation of the stomach, with tenderness over the pylorus and the presence of a tumour. Posterior gastro-enterostomy was performed on June 12th, 1900. On opening the abdomen the pylorus was found to be much thickened and adherent, forming a hard nodular tumour having the appearance and feel of cancer. Through the centre of the mass a No. 10 catheter only could be passed over a roughened ulcerated surface. An uninterrupted recovery followed. Food was begun the second day and solids could be taken in the second week without pain. He rapidly gained flesh and strength and is now well.

CASE 12.—The patient, a man, aged 48 years, who was seen with Dr. R——, was supposed to be suffering from cancer too advanced for treatment, the patient being extremely feeble and having lost from 2 to 3 stones in weight in six months. The presence of a tumour in the pyloric region with well-marked dilatation of the stomach and profuse coffee-ground vomiting rendered Dr. R——'s diagnosis extremely probable, though the history of pain from one and a half to two hours after food for three years with other symptoms of pyloric ulcer led me to hope that the disease might be simple. Operation was performed on May 30th, 1902. An extensive tumour at the pylorus associated with stenosis and dilatation of the stomach, with perigastritis and adhesions, together with numerous discrete though much enlarged glands, led me to perform gastro-enterostomy. The patient rapidly put on weight, gained strength, and lost all his distressing symptoms. When he returned to report himself in three months he was robust and well and no trace could be found of the tumour or of the dilatation of the stomach. He is to-day in perfect health.

These cases teach the important lesson that one ought not hastily to give a hopeless prognosis after gastro-enterostomy for tumour, for when there is any doubt whatever about the malignancy or otherwise of the growth it is well to give the patient the benefit that is derived from the hope of cure. Another lesson to be learnt is that an exploratory operation is worth performing in nearly all cases of tumour of the stomach, for even if the growth cannot be removed the rest engendered by a gastro-enterostomy will almost certainly give relief, and in some cases thought at first to be malignant a cure may be effected.

6. In cancer or other tumour of the duodenum producing obstruction to the onward passage of the stomach contents gastro-enterostomy acts exactly in the same manner as in cancer of the pylorus. As a rule this form of disease in the second part of the duodenum is removeable only with the greatest difficulty, in consequence of the important structures in the border of the lesser omentum being involved.

I was once tempted to perform such an operation which involved my removing the vertical part of the duodenum, part of the head of the pancreas, and about one inch of the common bile-duct, the passage of bile having to be made good by the performance of cholecyst-enterostomy and of the stomach contents by gastro-enterostomy. The patient promised to do well for some days, but leakage from the duodenum ultimately led to death from exhaustion. I shall in future be content with the performance of gastro-enterostomy alone, as in a case on which I operated recently there was a well-marked tumour (probably inflammatory around a duodenal ulcer) which entirely disappeared after gastro-enterostomy and the patient is now well.

7. Hour-glass contraction of the stomach may be due to chronic ulcer or to cancer. If the contraction be due to simple ulceration, gastroplasty is the operation of choice and in a number of cases in which I have performed it the results have been excellent; but if the stricture be a long one and the thickening be very extensive, then gastro-enterostomy, in which the proximal cavity is united to the jejunum, is the better operation, as in the following cases, but great care must be observed that the junction is not made between the bowel and the distal cavity as in at least two cases that have been reported, otherwise no benefit will ensue. It should be the operation of choice when pyloric stenosis is associated with hour-glass contraction.

* Virchow's Archiv, Band cii.

CASE 13.—The patient, a man, aged 52 years, who was seen with Dr. H——, gave a history of pain, vomiting, and loss of weight and strength for three years. Epigastric tenderness was well marked. Posterior gastro-enterostomy was performed on Oct. 12th, 1900. Hour-glass stomach was found, though the stricture was not extreme. The cardiac complement was also dilated. Recovery ensued. On March 4th, 1901, I received a letter to say that the patient's weight was 9 stones 11 pounds and that he was in good health. At the time of operation his weight was 8 stones 6 pounds.

CASE 14.—The patient was a man who gave a history of stomach symptoms for three years. In one attack perforation occurred. Posterior gastro-enterostomy was performed on Nov. 15th, 1900. Strong adhesions to the liver and colon were found. The stomach was contracted in the centre. The patient made a good recovery and when heard of subsequently he was in very good health.

Should the hour-glass condition be due to a circular mass of growth constricting the centre of the stomach the proximal cavity may be advantageously fixed to the jejunum, and if by good chance the growth be limited, the glands be not enlarged, and there be no secondary nodules, the mass of growth may be subsequently removed as in a case previously related.

8. In perigastritis with adhesions the operation of gastrolysis may be entirely curative as in many cases that I have operated on, but there are some cases where the adhesions are so extensive and the secondary dilatation of the stomach is so well marked that to rest content with simply detaching adhesions would be to court failure. If the pylorus is patent yet embarrassed by adhesions, I always separate them, and try to avoid their recurrence by interposing the right free border of the omentum between the raw surfaces left by the gastrolysis, thus substituting a long, freely moveable attachment for short binding ligaments should adhesions re-form. If, however, adhesions are very extensive and very short, dense, and firm, the operation of posterior gastro-enterostomy had better be done and this especially if at the same time there is stenosis of the pylorus or an hour-glass stomach. In December, 1900, I saw a woman, aged 57 years, suffering from constant pain at the epigastrium intensified by food so that she was unable to take any solids, and as she had been unrelieved by general and medical treatment I operated and found the anterior wall of the stomach adherent to the abdominal wall and to the liver. The extensive adhesions were detached and a posterior gastro-enterostomy was performed with the result that she was entirely relieved of her distressing symptoms and has remained well.

9. In tumour outside the pylorus but pressing on it and causing obstruction to the passage onward of the stomach contents gastro-enterostomy may be required at the same time that the tumour is treated. The following is a case in which a pancreatic cyst was drained and gastro-enterostomy was performed at the same time.

CASE 15.—A man, aged 35 years, after a history of ulcer of the stomach for four years associated with pain an hour after food and with vomiting and great loss of weight, was sent to me by Dr. G——, who had tried medical treatment most thoroughly with only temporary relief. The patient's weight had gone down from 170 to 130 pounds. From the history of the pain being relieved when the patient turned into the prone position and the fulness felt behind the stomach in the region of the pancreas, together with slight jaundice, it was suspected that the ulceration was in the posterior wall and that the pancreas was becoming involved. Gastro-enterostomy was advised but declined. The patient returned two months later in the last stage of exhaustion and with all the stomach symptoms more marked, the stomach being now greatly dilated; there was now a tense fluctuating tumour occupying all the epigastric region and extending well over to the right side which was diagnosed as a pancreatic cyst. Anterior gastro-enterostomy was performed on June 10th, 1902. A large pancreatic cyst was exposed containing four pints of grumous fluid. This was tapped through the great omentum and then drained, the tube being fixed in the cyst by a purse-string suture so as to make the opening embrace the tube tightly and prevent leakage. The posterior wall of the stomach and the pylorus were found to be fixed to the pancreas. The patient made a steady recovery and rapidly put on flesh. All stomach symptoms disappeared and he was able to return home within the month looking and feeling well. Though the fluid collected in the pancreatic cyst three months later it caused no return of stomach symptoms and the insertion of a tube soon effected relief of the tumour which is still being drained.

The following indications apply only after failure of systematic medical treatment.

10. In ulcer of the stomach, whether acute or chronic, not yielding to medical treatment surgical treatment is in the greater number of cases the only satisfactory method of dealing with these refractory cases and operation should be resorted to at a much earlier period than has hitherto been the custom and always before the patient is so far reduced by pain and starvation or the supervention of serious complications that weakness and anæmia render any operative procedure hazardous. Before the abdomen is opened it is quite impossible to say what operation or operations will be required and the surgeon must be prepared to adapt himself to circumstances on discovering the position of the ulcer and the conditions associated with it, especially as to the presence or absence of adhesions and other complications. The following case, one out of many on which I have operated, serves to show the beneficial effects following on gastro-enterostomy in intractable gastric ulcer. It acts by securing physiological rest of the stomach and at the same time curing the hyperchlorhydria which is usually present.

CASE 16.—The patient, a single woman, aged 32 years, seen with Dr. A——, gave a history of stomach symptoms extending over several years. She had had hæmatemesis in 1892 and 1896, since which time she had suffered from flatulence and pain after food. For two years epigastric pain had been constant but increased by food. For a year she had vomited daily and for some months only milk in small amounts could be retained. Epigastric tenderness was well marked and on distending the stomach with CO_2 it reached half an inch below the umbilicus and far over to the right of the middle line. Posterior gastro-enterostomy was performed on Oct. 5th, 1900. The patient returned home within the month, taking solid food without any discomfort and gaining flesh. On Nov. 8th Dr. A—— wrote: "I have seen Miss —— since her return and there is every reason to be pleased with her condition. She has lost all her pain and is taking food well. Allow me to thank you for her restoration to health." Her weight in February, 1901, was 8 stones 6 pounds; at the time of the operation it was 6 stones 12 pounds.

11. Duodenal ulcer very frequently fails to yield to general treatment and from the experience I have had of these cases I believe it is much more frequently the cause of fatal symptoms than is generally recognised. I hope to report a series of cases of duodenal ulcer treated by gastro-enterostomy on a future occasion.

12. In hæmorrhage from the stomach or duodenum as shown by hæmatemesis or melæna, where general treatment has been tried and failed and where the bleeding is persisting or recurring after brief intervals, operation is advisable with a view to find and to secure, if possible, the bleeding point or points or of performing gastro-enterostomy in order to obtain physiological rest and thus to favour natural hæmostasis.

I have been asked to open a discussion on the surgical treatment of hæmatemesis at the Medical Society of London in December. I need therefore not dwell on it now.

13. In persistent spasm of the pylorus, or Reichmann's disease, leading to dilatation of the stomach, pylorodiosis or stretching the sphincter may be effectual in relieving spasm and in producing immediate relief to the obstruction, but as it is apt to be followed by relapse I have given up performing the operation, in favour of gastro-enterostomy.

Not feeling satisfied with the calibre of the pylorus in one case after I had stretched it as far as I thought safe, I immediately performed pyloroplasty. The condition then revealed showed me the cause of relapse, for I found two rather extensive lacerations through the mucous membrane quite into the substance of the pylorus. As these lacerations would have had to heal under the unfavourable condition of being constantly irritated by food and the acid contents of the stomach there must have been a considerable effusion of plastic lymph which would inevitably have led to cicatricial contraction and so to stenosis. This, I suspect, occurs in all cases where the pylorus is fully stretched and explains my reason for having no faith in Loreta's operation.

14. Hyperchlorhydria is a regular concomitant of ulcer of the stomach, though it may occur apart from ulceration. As a rule it yields to medical and general treatment, but where such treatment fails to relieve and the life of the patient is being made miserable by constant indigestion with acid

eructations the operation of gastro-enterostomy is well worth consideration, especially when in such a case it can be performed with almost no risk, for in the absence of complications such as occur in ulcer and cancer the operation when properly performed by an expert ought to have no mortality.

15. *Persistent gastralgia.*—Cases must have occurred in the practice of every physician where although the positive signs of ulcer were absent, gastralgia of such intensity has persisted, and in case of temporary relief has recurred so regularly, that the patient is brought to the last stage of exhaustion by an utter inability to take food because of the pain induced by even a mouthful of solid. Some of these cases are doubtless due to simple ulcer, but in others the absence of tenderness in the epigastrium, of rigidity of the recti, of regular vomiting, and of hæmatemesis makes the diagnosis extremely doubtful. Even rectal feeding and absolute rest in bed do not always cure the condition and the patient gradually loses weight and strength and lapses into a state of chronic invalidism without any positive sign of organic disease. After all ordinary means have failed gastro-enterostomy is well worthy of consideration, and, as the following case will show, it may lead to excellent results.

CASE 17.—The patient was a single woman, aged 27 years, who was seen at the Leeds Infirmary. She had suffered from pain and indigestion since she was a girl; vomiting occurred at times, though she never brought up blood. The stomach was dilated and tender. Free HCl was found in the contents of the stomach. She had lost weight and weighed now 7 stones 6 pounds. Gastro-enterostomy was performed on March 7th, 1901. No scarring or other signs of ulcer were discovered. Soft solids were allowed at the end of the month. The patient made a good recovery and was able to take food without pain; ultimately she was completely restored to health.

16. In tetany of gastric origin. The prognosis of tetany occurring in gastric dilatation is undoubtedly very serious, and according to some authorities death occurs in nearly 75 per cent. of the cases. The largest mortality occurs in cases where the spasm in the extremities is associated with tonic spasms in the head and trunk muscles or with clonic spasm. My own experience of tetany and of the severe muscular spasms in association with gastric dilatation leads me to think that we may possibly take a more hopeful view if the cases be treated surgically at an early period. The following case will serve to illustrate my views.

CASE 18.—A man, aged 34 years, was sent to me by his medical attendant in January, 1895, with a view to have something done in the Leeds Infirmary to relieve his condition. He had been suffering for five years from pain after the ingestion of food, with attacks of vomiting. Latterly his condition had become aggravated, the pains occurring from half an hour to one hour after each meal and being relieved only by vomiting, so that for the last six months he had had to give up his work as a printer. For some time before coming under my notice there had been very evident peristalsis from left to right in the epigastric region. Throughout the period over which his stomach symptoms extended his bowels had for the most part been very constipated, but there were occasional attacks of diarrhœa. During this time he had attacks of what he described as "cramps" in his limbs and especially in his legs. He had lost very considerably in weight, as in December, 1892, he weighed 9 stones 7½ pounds. On examination there was found well-marked dilatation of the stomach, but the feature of the case which presented most interest in connexion with the present question was the occurrence while under observation of severe tetanic spasms affecting almost all the muscles of the body. So extreme and so widespread were these, the muscles of the trunk and of the cervical region as well as those of the limbs being affected, that on Jan. 17th the question of possible strychnine poisoning was raised. As palliative treatment of the stomach condition gave no relief the stomach was exposed on the 24th and the diagnosis of cicatricial stenosis with hypertrophy of the pylorus was confirmed. Pyloroplasty was performed, a bone bobbin being employed to insure patency of the new pylorus. Recovery was uninterrupted, and although the cramps were present up to the time of operation he never had a threatening of cramp afterwards. On Feb. 15th he was able to take a mutton chop for his dinner without inconvenience and by March 2nd (five weeks after the operation) he had gained 8 pounds. Two years after the operation he had quite recovered his strength and was working as usual, his weight then being just over what it was in December, 1892, and quite 2 stones above what it was at the time of the operation. There had been no recurrence of "cramps" or of muscular spasms of any kind. In a letter received at the beginning of 1899 he speaks of some stomach disorder, but he adds: "You will please understand that I am a new man to what I was when you saw me last." A recurrence of stenosis necessitated gastro-enterostomy, which I performed early in 1902, but it is interesting to note that on this occasion, though he was much wasted and was vomiting every day, there was no return of the tetany. He made a good recovery and is now well and strong again.

17. Acute gastric dilatation is one of the most serious diseases that can be encountered. It was first described by the late Dr. Fagge, his paper being illustrated by two cases, both in men, 30 and 31 years of age respectively, and both ending fatally. In the Leeds Infirmary during the past ten years there have been at least four fatal cases. But that the condition of acute gastric dilatation is not hopeless the following case distinctly proves.

CASE 19.—A woman, aged 35 years, who was under my care, recovering smoothly from cholecystotomy which had been performed a week previously, was suddenly seized with pain in the epigastrium, followed by vomiting, which soon became ineffectual in emptying the stomach. Rapid dilatation ensued and the stomach not only formed a large swelling filling up the superior abdominal region but also extended well below the umbilicus towards the pubes. This, owing to pressure on the diaphragm, and through it to pressure on the heart and lungs, led to great shock, quick and oppressed breathing, and a rapid, feeble pulse, with signs of lividity and imperfect aeration of the blood. The urine was scanty and, in fact, was almost suppressed. Strychnine was freely administered subcutaneously, but no relief followed until the stomach-tube was used when a large quantity of gas and several pints of brownish fluid were evacuated; the lavage was repeated several times during the next two days, during which time alimentation was entirely rectal. It is interesting to note that the pulse and temperature were paradoxical, the former running up to 150 and the latter down to 97·3° F. All the symptoms passed off under treatment almost as quickly as they came and in a week the stomach had returned to the normal size.

I would suggest that in every case of this kind where stomach lavage has failed, but only then (for the stomach-tube is the first indication, no matter at what stage it may be recognised, unless, indeed, the patient be actually dying), the abdomen should be opened and the stomach should be emptied and connected with the jejunum, thus providing for continuous drainage into the intestine. I believe that as yet gastro-enterostomy for acute dilatation has not been put to the test.

18. In an exceptional case of ulcer of the stomach eroding the pancreas and producing pancreatitis with abscess draining into the stomach, a gastro-enterostomy apparently saved the life of the patient by draining the very foul contents directly into the intestine. The case is reported in "Diseases of the Stomach and their Surgical Treatment," p. 168, so that I need not repeat the account here.

19. Cholelithiasis may lead to perigastritis and the contraction of bands of lymph around the pylorus may produce obstruction or kinking, thus leading to dilatation of the stomach at the same time that the concretions lead to obstruction of the bile-ducts. As a rule the condition can be relieved by gastrolysis, but where the adhesions are extensive or the thickening of the pylorus is very pronounced the operation of gastro-enterostomy may have to be performed at the same time as the cholecystotomy. Gall-stones may also lead to fistula between the gall-bladder and pylorus and the thickening of the pyloric canal may lead to obstruction, for which gastro-enterostomy may be the most suitable operation, though in the cases that have come under my care the repair of the fistula in one case and pyloroplasty in another were sufficient when combined with cholecystotomy to remedy the disease.

20. In atonic dilatation of the stomach general and medical treatment, supplemented, if need be, by electrical treatment and lavage, if carried out systematically and for a sufficient length of time, usually yield good results, but in some cases, despite regular lavage of the dilated organ, well-regulated diet, and general medical treatment, the dilatation persists and the nutrition of the patient and the general health become seriously impaired. In such cases

the operation of gastrorrhaphy or gastroplication may be worth considering, though in certain cases gastro-enterostomy may possibly be performed with advantage. The indication for operation in these cases is not so distinct as in the cases of dilatation due to pyloric obstruction, seeing that the cause is a general one; nor is the recovery after operation so rapid and satisfactory. The general health requires considerable attention at the same time that the stomach is being dealt with.

I fear that you may think that I have made out a very formidable list of conditions suitable for relief by gastro-enterostomy, but I trust that the cases which I have related as examples will serve to show that I have not exaggerated the importance of my subject.

In conclusion I would say that if the procedure is to hold its own as one of the most beneficial operations in surgery it must continue to be done with a very small mortality, which will be effected only by observing every care in detail before, at the time of, and subsequently to, operation.

LUNACY AND THE LAW.[1]

BY T. OUTTERSON WOOD, M.D. DURH., F.R.C.P. EDIN., M.R.C.P. LOND.,

SENIOR PHYSICIAN TO THE WEST-END HOSPITAL FOR NERVOUS DISEASES, EPILEPSY, AND PARALYSIS.

IT augurs well for the success of the action taken by the conjoint committee of the British Medical Association and the Medico-Psychological Association with regard to the amendment of the Lunacy Law to enable cases of recent (incipient) insanity to be legally treated in private care without being certified as lunatics, that the Lord Chancellor inserted into his proposed Lunacy Bill a clause to meet our requirements in the very terms which I advocated at the annual meeting of the British Medical Association in 1896. The importance of the subject must be my justification for bringing before this association some features in connexion with it from a practical point of view. I look upon the question for my present purpose as being divided into two sections only, for I intentionally leave the rate-aided class to be dealt with elsewhere.

Section 1.—The proposal to extend the provisions of the present law so that incipient cases of mental disorder may legally and without delay be brought under care and treatment without certification; and

Section 2.—The suggestion that cases admittedly certifiable, or even already certified, may be placed in single care without the so-called stigma of certificates; or if already admitted into an asylum, they may be taken out and placed in the house of some relative or impecunious person and kept there for profit, and not necessarily for cure, for it is not suggested that these patients may be curable.

Now, with regard to the first section which deals with cases of recent—i.e., incipient—insanity I would divide them into two classes—(1) those who are amenable to reason and advice, who are absolutely uncertifiable, and who can to a great extent take care of themselves; and (2) those recent cases of a mild type in which the mental warp is more pronounced, who may require removal from home, who are almost certifiable or who may even have harmless delusions, who require a certain amount of moral restraint, and who may object to the control necessary for their proper treatment. With regard to Class 1, no alteration in the law is necessary; these patients are as capable of treatment outside the Lunacy Law as any ordinary medical case. I have to deal with a large number of them as out-patients at the hospital and I have no difficulty whatever with them. It is with regard to Class 2 that the law requires amendment to enable us to obtain the legal control of the patient, and a system of notification seems to me the best to meet the requirements of such cases. This, however, is no new idea. I have for years advocated a relaxation of the present law in order that incipient, doubtful, or undeveloped cases might under suitable conditions and at the earliest moment be brought under that expert care and treatment which experienced alienist physicians know to be so necessary for the arrest of the disorder and the cure of the patient. Upon this point I am glad to think we are all agreed. It is the adoption of a principle that has worked well in Scotland for many years and I know of no reason why, under proper conditions and with the necessary safeguards of skilled supervision, it should not work equally well in England and Wales, the order of a magistrate on this side of the border taking the place of the order of the sheriff as in Scotland for the legal detention of the patient for a definite period. There is, however, one point upon which we must insist and it is that wherever these cases are so placed, whether it be in a medical man's house or not, they shall be at once notified to the Commissioners and be placed under their official supervision as well as that of some skilled and independent local authority appointed by the Lunacy Board. Above all, we must be certain that it shall not be merely a matter of boarding them out in so-called medical homes or private houses kept by unqualified, inexperienced, and untrained persons, but that we shall have some guarantee that they will be cared for and looked after by those who have been trained in some recognised institution for the insane or whose competence is assured by long experience and who shall be approved of by the Commissioners; and, further, that they shall be nursed and attended not by hospital nurses who have had no asylum training, but that their nurses shall be asylum-trained and, preferably, that they shall hold the certificate of the Medico-Psychological Association for proficiency in nursing and caring for those of unsound mind.

It is absurd to imagine for one moment that such cases as these can be properly treated by persons with no special knowledge of, or experience in, all the details of the moral control that these persons require and we must speak out with no uncertain voice in our condemnation of any attempt to minimise this the most vital part of their treatment. The periodic visits of a consultant are practically useless as regards the supervision of these details, which are of daily, even hourly, importance for the cure of the patient. This, of course, we cannot expect physicians, however eminent, to appreciate who have not made a special study of the care and treatment of mental disorders. It is the absence of this special knowledge on the part of the hospital physician which will permit him, on the one hand, to give these, the most difficult of all cases to manage, into the care of inexperienced people of limited means, or hospital nurses with no asylum training, who do not know what to do with them, who cannot understand the constant supervision and the unceasing vigilance which they require, who are unable to anticipate a suicidal impulse or an outbreak of homicidal violence, and who will either rush in terror from the room at an outburst of excitement or will resort to the injudicious and unnecessary use of mechanical restraint; or, on the other hand, to give them up to the tender mercies of the keeper of some medical home or nursing institution who has never seen the inside of an asylum and who does not hesitate to send out hospital-trained nurses to acute mental cases and untrained domestic servants as trained mental nurses. I am speaking of things of which I have personal knowledge and in my opinion instead of the law being made more elastic with regard to these transparent frauds it should step in and compel every nursing home or institution receiving such cases as these to be placed under some official supervision. If this were done we should hear less of the fatalities which are of such frequent occurrence and which help to fill the columns of the daily press. While, therefore, we advocate the early treatment of cases of incipient insanity without certificates let us endeavour to make sure it will be carried out in such an efficient manner that there shall be no excuse in future for the smuggling away of what are termed "borderland" cases or those deliberate evasions of the law which have been alluded to, and even boasted of, before the members of this law-abiding association and which have in so many instances been followed by fatal results.

I will now turn to the second section of the subject—I mean the suggested extension of this system of notification for incipient cases so as to make it applicable to chronic certifiable cases of insanity and to those already certified and living in institutions for the insane. This, in my opinion, would be a dangerous innovation. It is sad to reflect that at this time of day we are compelled to reiterate the arguments of our predecessors in this association against the unwisdom of such a retrograde step and that the cruelties of mechanical restraint must again be brought forward to steady

[1] A paper read before a general meeting of the Medico-Psychological Association held at the County Asylum, Mickleover, near Derby, on Feb. 12th, 1903.

the minds of well-meaning but ill-informed philanthropists and to bring into bold relief the danger of giving a free hand to those impecunious persons who bombard us with applications for the care of this class of patient. One of these individuals who was anxious to obtain the care of such a one endeavoured to impress upon me that blindness and being crippled would not matter. I presume if the unfortunate patient was blind he could not see and criticise his food and surroundings, and if crippled he could not escape and would require less expensive supervision.

It has been suggested that the relatives of many certified patients should take them out of asylums because they are not dangerous to themselves and others and that they could undertake the care of such cases as well as, or even better than, they could be cared for in an asylum without the "stigma" attaching to them of being certified lunatics. This to my mind is mere sentiment; nothing can alter the fact that the patients are insane whether they are certified or notified and, whether the fastidious friends like it or not, the fact remains. My experience through a long series of years spent among the insane is that more downright cruelty and neglect are often inflicted upon such patients by friends and relatives owing to their ignorance and incompetence, and through judgment giving way to feeling, than are possible under the splendidly humane treatment of such cases in our institutions for the insane, private as well as public, which are a credit and an honour to our country.

In support of this statement permit me to give you an account of a case which came under my notice a short time ago. [Dr. Wood here gave details of the case and continued:]

I confess to being somewhat shocked at such a condition of things occurring in the closing months of 1902. But these are the evasions of the law which we must expect to increase and to multiply if the law is made "more elastic" with regard to cases of certifiable insanity without adequate official supervision. I do not wish to weary you with a recapitulation of further instances of the inhumanity of ignorance which are only too well known to us, but I venture to say that if the supervision of the certifiable insane in single care by the Commissioners in Lunacy is in any way relaxed we shall soon have a recrudescence of those scandals which brought on to the statute-book the Lunacy Law as it now stands. No perfunctory visitations of the physician can prevent them. Only within the last month I had three applicants for the post of nurse to a mental case and in view of the question which I have raised of asylum-trained nurses being so necessary for the care of mental cases permit me to describe to you the kind of persons these three applicants were. [Here Dr. Wood gave details of his interviews with would-be mental nurses.] Then there is a further view of the subject which the following incident illustrates and it is a pretty example of another method of evading the law. [Details were here given.] We have arrived at a serious state of thing if consultants, either unable or unwilling to recognise a case of acute mania, can bring themselves to call it "hysteria" in order that they may pander to the pride and prejudice of fastidious relatives who look upon this, one of the most affecting disorders that can afflict a fellow creature, as a crime or something to be ashamed of. Is it not rather the duty of a consultant to support the medical practitioner in his endeavour to induce the relatives of the sufferer to take a sane view of her malady and to do their best for her rather than to hand her over to such untrained and unreliable people as I have described to be "policemaned" as a case of "hysteria"?

They who have spent their lives in endeavouring to ameliorate the condition of the insane must not stand by without protest and allow a reversion to those methods of barbarism which would be bound to follow any relaxation of the law without something more to protect the unfortunate patients than the mere visits of a physician who may have no special knowledge of the care and treatment which they require. Above all, we must be satisfied that those who are allowed to take charge of insane patients are properly trained and competent to do justice to their charge.

The point upon which the whole question hangs is that of adequate supervision. It is a very simple one. The Commissioners in Lunacy have all the facts in their possession. There is no need for any commission of inquiry about the Lunacy Laws. We know quite enough about them already. The appointment of Deputy Commissioners together with local expert representatives of the Lunacy Board in centres of the population will, in my opinion, meet every requirement. By these means the vagaries of those who take charge of cases of doubtful or confirmed insanity will be held in check, and the friends and relatives will be controlled and guided by the firm but kindly supervision of trained experts who are qualified by long experience to guide and to direct them in the right way.

Margaret-street, W.

THE GELATIN TREATMENT OF HÆMOPTYSIS.

BY H. M. TICKELL, M.A., M.D., B.C. CANTAB.

IT must be admitted that the usual methods of treating hæmoptysis have not by any means attained that degree of efficiency which this distressing and dangerous complication of pulmonary tuberculosis demands, and that an agent capable of acting with greater certainty than those in common use will be cordially welcomed by the medical profession. Of the old drugs, morphia is the most highly recommended, and doubtless, when injected hypodermically, it exercises a favourable influence by relieving mental distress, allaying cough, and quieting the action of the heart, and by these means promoting coagulation in the smaller vessels. But, on the other hand, there are some cases in which morphia increases the tendency to asphyxia by retarding the expulsion of blood from the bronchi and this is a danger always to be borne in mind. The treatment by morphia, moreover, gives no security for the final arrest of the hæmorrhage, and in the severer degrees of hæmoptysis it fails us entirely.

In the treatment by means of the rectal injection of the solution of gelatin presently to be described we have a method of checking hæmoptysis which promises exceedingly well, and one which is free from the drawbacks of morphia. In the *Aerztliche Mittheilungen* of Sept. 17th, 1902, appeared an article on the Gelatin Treatment of Hæmoptysis by Dr. Jungmann, assistant to Dr. Hettinger of Nordrach, and I am indebted to the author for much valuable information on the subject.

First, let us consider the treatment by hypodermic injections of the gelatin solution. This method has been used in France and Germany with brilliant results as regards the checking of hæmorrhage, but unfortunately it is associated with a series of unpleasant effects which at times are of such a nature as seriously to call in question the utility of the proceeding. In the first place the injection is accompanied with severe pain which is due not so much to the puncture of the skin as to the distension of the tissues by the solution. Even if a local anæsthetic be employed the pains usually supervene shortly after the operation and may persist for two or three hours, and when the operation has to be repeated several times on successive days the painfulness of the procedure becomes a matter of serious consideration. Again, not infrequently necrosis of the skin occurs as a consequence of the injection, so that the patient has to remain a long time in bed—a most unfortunate circumstance from the point of view of open-air treatment. In some cases tetanus has been observed to ensue. Levy and Bruns[1] examined six samples of gelatin and found tetanus spores in four of them. It is, therefore, necessary to sterilise the gelatin before use. The question as to whether prolonged boiling destroys the value of gelatin as a hæmostatic may, according to experience in Dr. Hettinger's sanatorium, be answered in the negative.

The most disagreeable effect of the hypodermic injection of gelatin undoubtedly consists in the raising of the body temperature. As reported from Brehmer's Institute in Görbersdorf, one patient treated with the gelatin injections on five successive evenings had a temperature of from 40·3° to 40·7° C. (104·5° to 105·2° F.). The subsidence of the fever is irregular, but it may persist for 10 or 14 days and thus increase the debilitation of the patient.

All these observations show that the treatment of

[1] Deutsche Medicinische Wochenschrift, Feb. 20th, 1902.

hæmoptysis by the hypodermic injection of gelatin involves constant and careful watching of the patient, such as can be satisfactorily carried out only in hospitals or similar institutions. For the general practitioner it could be of no use.

This form of treatment has been applied with success in other varieties of hæmorrhage. For instance, Holtschmidt[2] treated five cases of melæna neonatorum by hypodermic injections of a 2 per cent. solution of gelatin in normal saline solution; 15 cubic centimetres were injected, usually in two places to avoid tension. The hæmorrhage was checked in each case after the first or the second injection, and all five patients recovered. Of the previous 14 cases in the same clinic which were not treated by gelatin seven were fatal.

On account of its many unpleasant complications the above treatment has not been used in Dr. Hettinger's sanatorium for a long time, the older methods being employed previously to the occurrence of the following case.

The patient was admitted on March 3rd, 1902, having twice within the previous week brought up large quantities of blood. Hæmoptysis occurred again on the day of admission. On the next day bleeding occurred once more and the patient lost on each occasion about a quarter of a litre (nearly nine ounces). On the 6th there was another hæmoptysis. From this date until the 13th a more or less copious loss of blood occurred nearly every day. Now that a fatal termination appeared imminent it was decided to employ gelatin, but in consequence of the strong objections to the hypodermic method the solution was given per rectum. On the 14th there was no hæmoptysis. The sputum was coloured. The rectal injection was repeated. During the next three days only traces of blood were seen in the sputum. The gelatin treatment was continued until the 17th when the sputum was free from colour. From this time forward the patient had no return of hæmoptysis.

Encouraged by this success the treatment was applied in the same manner to four other patients during the months of April and May and was always attended by the same favourable result. In one case in which the hæmoptysis was of comparatively slight degree two injections a day were sufficient to free the sputum from any trace of blood, but it was the rule to give three injections per diem. In all the other cases the sputum was clear of blood within four or five days of the first injection. Since May 15 more cases have been treated at the sanatorium in a like manner, and in each case with unqualified success. Slight cases in which a small quantity of blood was brought up on only one occasion did not receive this treatment. Others who have tried this method report equally good results.

In contradistinction to the hypodermic injection the method here described is quite painless. Further, every danger of infection is avoided. Also, no raising of the temperature is produced and, of course, there is no necrosis. In short, the rectal injection of gelatin solution is unattended by any disturbing complication and it has the same effect in stopping hæmorrhage as has the subcutaneous injection. A strong point in favour of this method is that it can easily be carried out in general practice. The gelatin can be obtained from a druggist or from a restaurant and the only apparatus necessary is a jug holding about two and a half pints and an indiarubber tube with a blunt nozzle. The nozzle can be held in the rectum by the patient himself while the nurse holds the vessel containing the solution at a height of about two or three feet so that the solution flows into the rectum at a very moderate pressure. When the hæmorrhage has been completely stopped the patient must be kept quiet in bed for several days on a light diet. It may here be mentioned that the injection does not cause any action of the bowels.

The solution is prepared in the following manner: 50 grammes (about one and three-quarter ounces) of gelatin are dissolved in one and a quarter litres (two pints three and three-quarter ounces) of boiling water and boiled very gently for one hour when the volume is reduced by evaporation to one litre. The solution is then cooled down to the body temperature and a quarter of a litre (nearly nine ounces) is slowly passed into the rectum from an ordinary irrigator in the manner described above. The injection is given three times a day until the sputum ceases to show any trace of blood.

Nordrach, Schwarzwald.

[2] Münchener Medicinische Wochenschrift, Jan. 7th.

THE USES OF X RAYS IN OPHTHALMIC SURGERY.[1]

BY M. S. MAYOU, F.R.C.S. ENG.,
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I HAVE to thank you for the honour you have conferred on me in asking me to read a paper before this society to-night. I accepted, as I hope that I may be able to show in some small degree how this comparatively new science may be far-reaching in its extent, even in this one branch of medical science—ophthalmic surgery. My experience has extended over the last 18 months, during which time I have daily undertaken the treatment and investigation of cases, and I have to thank Mr. L. V. Cargill, Dr. F. H. Low, Dr. O. F. Grünbaum, and others for their kindness in sending me cases and for their opinion on these cases during and after the treatment. The whole question is too large to deal with to-night and I propose to select the following subjects from it: (1) the localisation and treatment of metallic foreign bodies in the globe; (2) rodent ulcer of the eyelids—the pathology of the cure; and (3) the treatment of trachoma—granular ophthalmia.

1. *Foreign bodies in the globe.*—It is not out of place to repeat how invaluable these methods of radiography and localisation are to ophthalmic surgery and the great boon that Mackenzie Davidson has conferred on us. During the last year I have had sent to me from the Royal Eye Hospital, the Seamen's Hospital, and King's College Hospital 16 cases of supposed foreign bodies in the globe; of these, 13 were found and localised, two eyes contained no foreign body, and one was missed, about which I wish to speak later. Of the 13 all were verified and found to be accurate. The method adopted was as follows. In recent cases and cases where there was much photophobia a wire stitch was fixed in the conjunctiva directly below the centre of the corneal margin, the eye having been first cocainised, but in cases where there was no photophobia a piece of fine wire was fixed over the lower lid and kept in position by the lashes and the patient was directed to gaze at some object so as to bring the corneal margin in contact with the summit of the loop.

The head was fixed in a Mackenzie-Davidson head-rest, taking care that the cross wire did not fall across the orbit. I wish to emphasise this point, as it was due to this occurring that the case mentioned above was missed, the shadow of the foreign body, which measured barely a millimetre, falling across the shadow of the wire and being obscured by it. It was subsequently extracted in the lens, which had become opaque, so no harm followed. Two separate photographs are taken, as they are liable to render the images indistinct when taken on the same plate. This is done twice over, as I have seen a foreign body missed in two successive photographs owing to the patient moving his eye and making the image of the foreign body, which was a very small one, indistinct. Half a minute's exposure is generally sufficient. The method of subsequent localisation is worked out on a drawing-board; it is cheap, efficient, and takes practically no more time than other methods. Having found the relation of the foreign body to the cross wire and to the wire on the lid, the next thing to do is to mark it on an eye drawn to scale, such as can be found in Quain's Anatomy, and observe its relation to the various structures of the globe. The shape of the foreign body is determined by using some form of stereoscope and the one I find most convenient is a modification of Wheatstone's which I have had made to take negatives; it can be used at once after developing the negative, as immediate extraction of the foreign body is of the utmost importance.

The size of the foreign body should be very carefully measured, as the size of the incision for its removal must be regulated by it. I cannot emphasise too much the importance of immediate localisation and removal of foreign bodies as (1) they are said to be the most fertile source of sympathetic ophthalmia; (2) they are more likely to give rise to suppuration if left; and (3) if left for a day or two they become rapidly encapsuled and often defy extraction with the electro-magnet. In two of the cases I have mentioned,

[1] A paper read before the Roentgen Society on Dec. 4th, 1902.

although the magnet was literally applied to the foreign body which was in the lens, it could not be withdrawn, and out of seven recent cases in which the foreign body was in the vitreous and had penetrated the lens only one eye was saved; this foreign body had been in the eye only four hours. In cases in which foreign bodies have been in the eye some time, although they are generally small and aseptic, the prognosis as regards extraction is not good, as they become encapsuled, which may lead subsequently to siderosis, &c., unless situated in the lens, when they can be extracted with that body with good result.

In operating for these foreign bodies the best method, except in a few cases when the foreign body is in the lens, is to use a small electro-magnet. I must say here that I have not seen the large magnet used very much, but it always seems to me that the traction of a foreign body through the globe regardless of structures is a most unscientific procedure, causing vast injury to the intra-ocular contents. I have seen more than one case in my limited experience in which the eye would have been destroyed if this method had been adopted, and although I have read Mr. A. F. MacCallan's valuable paper on the subject I still think that the Haab's magnet should only be used after failure of the small one. The incision in the globe must be large enough to admit the magnet and to allow the foreign body to come out, and the magnet is applied, if possible, to the narrowest diameter of the foreign body. When the foreign body is lying in the vitreous I think equatorial incisions are preferable to radial, as they are more easily held apart and do not go so near the ciliary body. No stitches are necessary in the sclera and it is better if possible to cover the wound with conjunctiva and muscle by turning them back in a flap before incising the globe and having the sutures in readiness for immediate closure of the wound, after the method which, I believe, was first introduced by Mr. Cargill.

Going once more over the salient points as regards the method of localisation: (1) immediate localisation to be repeated if the foreign body be not found; (2) the use of separate plates; (3) care to be taken not to let the cross wires fall within the shadow of the orbit; (4) localisation and estimation of size; and (5) the use of the stereoscope for the estimation of the shape, preferably one made for negatives, as it saves time.

The points to be determined by the x rays before operating are: (1) the size and shape of the foreign body; (2) the situation with regard to the intra-ocular contents; and (3) the position of the foreign body with regard to the wound to be made in the globe for its extraction or with regard to the entrance wound.

Prognosis is influenced, apart from points defined by the x rays, by the following considerations: (1) the nature of the case—i.e., recent or old-standing; (2) the condition and size of the foreign body on entrance; (3) the situation and size of the entrance wound; and (4) injury to the intra-ocular contents.

2. *Rodent ulcer of the eyelids.*—The eyelids are a common site for rodent ulcer, especially the lower, and, like rodent ulcers in other situations, can be cured by the application of the x rays. I do not propose to-night to speak much of the methods of exposure, but of the pathology of the cure and some of the changes found in the tissues. When the x rays are applied to healthy living tissues the most noticeable effect is an acute inflammation in the part, which does not extend deeply into the tissues but is quite superficial. The peculiarity of this inflammation is that it does not reach its full height until some time after the exposure, say in from one to three weeks. This inflammation is greatly increased and more rapidly brought about by simultaneously applying irritants. This point I want to emphasise and to illustrate by one or two cases, as I think it is not generally noted. A man was sent to me to be x-rayed for a superficial epithelioma of the hand. After about two weeks' exposure it was thought to be increasing in size, so a local excision of the growth was performed. So much sloughing occurred that the arm had to be amputated above the elbow. Some time ago I had rather a severe x-ray burn on my hand and I found that the least irritation, such as washing my hand, caused it to become hot, painful, and bright red, and after assisting at an operation and putting my hands in 1 in 20 carbolic acid solution extensive sloughing of the skin followed. This observation led me to use 1 in 20 carbolic acid solution for dressing rodent ulcers in the early stages of x-ray treatment whenever possible, and this I find has the double advantage of keeping them aseptic and of accelerating primary reaction.

This susceptibility to irritants can be largely accounted for by the vaso-motor paralysis which occurs in an inflamed part and which when more irritation is applied, leads to greater dilatation of the vessels. This dilatation of the vessels seems to be permanent at the seat of the most acute inflammation, for if a part be examined after recovery from an x-ray burn dilated vessels can be seen all over the area. This increased susceptibility to irritants is a most important factor in the healing of rodent ulcer, for I think it is largely due to the irritation produced by the rodent cells on the surrounding tissues that the x rays have such a wonderful effect. Otherwise, why should the new growth disintegrate and not the surrounding tissue?

By the application of the x rays to a part we can produce an inflammation leading to anything from a mild leucocytosis to an actual gangrene. This is brought about I think in exactly the same way as an inflammation is produced by other forms of stimuli and is most severe at the point first struck—i.e., the superficial tissues. All evidence tends to show that this form of energy does not penetrate deeply and is probably not produced by the rays which penetrate the body.

In rodent ulcer the tissues are invaded by a new growth which sets up a slight inflammation, and this in all probability is nature's method of trying to rid herself of the disease. At the same time the growth is dependent on the underlying tissues for its nutrition. Now if we excite an acute inflammation the part furthest from the sources of nutrition dies and will come away as a slough. This will therefore account for the disappearance of the large masses of nodular growth which so rapidly subside under treatment. But if a section of rodent ulcer be examined we find lying under apparently healthy skin cells of the growth. Now how is it that these cells disappear also, as they obviously cannot be thrown off as sloughs? If a section of rodent ulcer after it has just begun to react to the x rays be examined we find that the clumps of epithelial cells which make up the growth are surrounded with enormous numbers of leucocytes. It is the duty of these leucocytes to remove all irritating substances from the part by breaking them up and carrying them away, or, failing that, to encapsule them with fibrous tissue, shut off their nutrition, and so prevent their spread. In a section of rodent ulcer which has nearly healed we find a mass of granulation tissue organising, with healthy epithelium growing in from the edge; scattered here and there amongst the infiltration leucocytes are epithelial cells of the growth in various stages of degeneration. The degeneration seems to take place from without inwards towards the centre of the clumps of epithelial cells, which become vacuolated, and the granules in the cells multiply and collect around the cell wall, seem in places to be making their way through it, and finally disappear. The nuclei do not as a rule proliferate, although there are some large cells with multiple nuclei to be seen which are probably derived from the stroma. The chromatin ceases gradually to take up the stain until nothing but the cell wall remains, which is apparently removed by the leucocytes. In treating a rodent ulcer I find it most useful to remove portions of the growth from time to time to see if there are any active cells of the growth present and if they have all disappeared to cease treatment.

3. *The treatment of trachoma by the x rays.*—In treating any disease it is almost essential that we should first know its exact pathology. Although a great deal of work has been done in the pathology of trachoma we are not yet absolutely sure that the exact causative factor has been discovered and therefore cannot be sure that any treatment adopted is the best possible. In trachoma we have a disease which is very closely allied to lupus in many respects in that it is characterised by the formation of nodules or infiltrations consisting of masses of round cells, and there is every evidence that the disease is probably due to some organism closely allied to the tubercle bacillus.

At the present time trachoma is cured by applying some form of irritant to the lid, either by chemical means, such as copper sulphate, corrosive sublimate, or jequirity, or mechanically by rolling, brushing, or other operative methods. These irritants must act in one of two ways: either (1) simply by the reaction they set up, partly by causing a leucocytosis and subsequent cicatrisation of the nodules, and partly by mechanically removing the diseased tissues; or (2) by direct action on the organism causing the

disease, if such organism be present. Taking the first of these, the method we adopt very commonly is the application of copper sulphate or some mild caustic. At each application we destroy the epithelium of the conjunctiva on which we rub it, and although we cure the trachoma an excessive amount of scar tissue is left, causing entropion and other deformities of the lid. As regards rolling, brushing, and other operations, they have the additional advantage of removing the actual diseased tissue, but it is generally recognised that they are only suitable for certain cases and that even in these cases the cure is not generally complete unless they are followed by some form of caustic to keep up the irritation set up by the operation.

In the x rays we have a method of setting up a leucocytosis with the absolute minimum of destruction to epithelial and other tissues; and further we have a means of producing an inflammation from a very slight leucocytosis to an actual gangrene of the part which with due care and experience we have under almost perfect control. Not knowing the organism which causes trachoma we cannot say whether the irritants which are used in its treatment, or the x rays, have any effect on it. But we have in the x rays a method of producing leucocytosis in any degree of severity from that following a mild application of perchloride of mercury up to that induced by jequirity; and, further, this leucocytosis is much more prolonged than that in any method previously adopted and the destruction is not nearly so great. Although granules disappear very rapidly under the x rays operative methods, which have the additional advantage of removing the diseased tissue, must be preferable to some extent except that the patient has to undergo an operation, but such operations can be followed by the x rays to complete the work in preference to one of the other irritants now in use. Operation, however, should never follow x-ray treatment without a considerable interval.

At the beginning of 1902 I showed before the Ophthalmological Society a case of trachoma which had been treated by the x rays and which, so far as I know, was the first of its kind. The method adopted was to cover the whole face, with the exception of the affected eye, with a metal mask. (Since then I have discarded the mask altogether, as now I never expose the patient sufficiently to get any reaction at all in the skin.) The upper lid was then everted and the lower lid was pushed up so as to cover as much of the cornea as possible, but in bad cases of pannus the cornea is left exposed. I have never had any trouble with the globe following x-ray treatment; and in a case of rodent ulcer of the lid in which this treatment was used for six months and which I showed at the same society last June there were no signs of retinal, corneal, or other trouble, with the exception of conjunctivitis, and the patient's vision remained the same (⅔) throughout the treatment. The patient is seated about nine inches from the anode with a moderately soft tube and a current of six ampères. Two minutes' exposure is given for from four to six successive days, depending on the case. If there be much injection or the case be an acute one four are generally sufficient. A week's rest is then given and if no reaction is set up the patient is exposed twice a week until there is a slight increase in the photophobia, which shows that he is beginning to react. About this time the granules begin to disappear from the lids. Exposures once, twice, or three times a week are carried out until they disappear entirely When once the granules have disappeared all treatment must be stopped, as it requires some weeks for the infiltration set up by the x rays to settle down and it is difficult to tell whether the disease is absolutely eradicated, as the lid remains injected for some time after treatment has ceased. The final result to the lid is most satisfactory. Instead of the white puckered conjunctiva gained by other methods a supple, non-contracted, non-scarred conjunctiva, with no obliteration of the fornices unless they are already gone before treatment, is produced, similar to the soft, supple scar in the skin following this form of treatment in rodent ulcer, as compared with the dense cicatrix of excision.

As regards the effect on pannus, it often clears with great rapidity, especially if recent, and it is the common thing for patients to say that they see more clearly from almost the first exposure. But even dense corneal opacity will often clear considerably and in one case of extensive destruction and cicatrisation of the cornea, in which at the commencement of treatment the patient could only see shadows, in two months she could count fingers three feet away. Another peculiar point is the amount of exposure required by different patients. Sometimes the granules begin to disappear from almost the first exposure; others require eight or ten exposures before showing signs of reaction.

With regard to the cases suitable for treatment the most satisfactory are the chronic cases, and of course the earlier they seek treatment the more rapid and satisfactory is the result. These patients will stand more frequent exposure than any others; acute diffuse infiltrations with thickening of the lids and much photophobia require more careful exposures extending over a much longer period. Old-standing cases in which the lid trouble has almost disappeared, but in which there is much opacity of the cornea, will often improve considerably under exposures of long intervals after the first reaction, which should be mild. The chief advantages of this treatment are: (1) there is considerably less deformity in the lid after treatment; (2) it is practically painless treatment; and (3) pannus clears more thoroughly. It is eminently suitable for hospital patients who cannot attend daily for the other methods of treatment to be carried out. In the first cases the patients were troubled with some falling out of the lashes and conjunctivitis. In no other case out of some 15 has there been similar trouble.

Weymouth-street, W.

THE TREATMENT OF EPILEPTICS.

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As I had no opportunity, owing to want of time, to join in the discussion on Dr. J. S. Risien Russell's and Sir Victor Horsley's admirable papers on the Treatment of Epileptics which were read before the Medical Society of London on Feb. 9th,[1] I take the occasion to make some observations on the subject in the columns of THE LANCET.

Among the causes of epilepsy described by Dr. Russell and Sir Victor Horsley no mention was made of errors of refraction, which my colleague, Mr. Work Dodd, in a paper in the sixteenth volume of *Brain*, showed might be a cause of epilepsy. He examined 100 consecutive cases of this affection and found that by correcting the errors of refraction, in combination with other treatment, 49 were cured or relieved. I think that this is a point which is worthy of attention by the medical profession. I am in agreement with Dr. Russell and Dr. C. E. Beevor that a toxic cause of epilepsy has not yet been proved, though I admit that when bromism has been produced great benefit will be derived by the use of hot baths, internal antiseptics, and saline enemas. In most cases there is neurotic inheritance and an exciting cause is only necessary to produce a fit. This is an indication that all exciting causes, such as indigestion, constipation, the use of alcohol, irregular meals, late hours, the presence of worms, &c., should be removed as much as possible. I am in favour of limiting the amount of meat to be consumed by the patient, and in some cases of omitting it altogether, certainly at the commencement of the treatment, for I have noticed in cases in which much meat is eaten that there is great difficulty in reducing the number of fits. I believe that what may be called the home treatment of epilepsy is of importance. The patient should lead a quiet life, free from excitement, and should be subjected to cold baths or cold sponging daily. Outdoor exercise and a moderate degree of mental work are necessary and care should be taken to place the patient in such circumstances as will promote his welfare and recovery. It is necessary that he should be careful, prudent, and temperate in all things. Children who are the offspring of a neurotic family require to be brought up carefully, and later should be put into some occupation in which they will be free from excitement and worry, such as the Civil Service, in which the work is light and the hours of employment are not long.

With reference to the treatment by drugs, I am in favour of giving large doses of the bromide and I prefer the combination of ammonium, sodium, and potassium. If for any

[1] THE LANCET, Feb. 14th, 1903, p. 439.

reason this combination is not desirable and only one salt is required, I give the bromide of ammonium as it is not so depressing as the bromide of potassium. In this statement I think I am in agreement with Dr. Beevor. In some cases I have found a combination of antipyrin with the bromide useful. The use of this drug for this purpose was brought to my notice by my colleague, Dr. A. de Watteville, some time ago and I prescribe it in doses of five grains three times daily for children and ten grains three times daily for adults. I have noticed that in many cases where the bromide alone has not produced much result so far as the lessening of the fits is concerned the addition of antipyrin has proved useful, and this result is no doubt due to its analgesic properties. In cases where the fits occur at night only I direct the patient to take just before going to bed or to be given a double dose of the bromide if the fits be infrequent and to take a large dose only at night if a great number of fits occur. It will often be useful to give a large dose of the bromide at night in the cases of clerks and workmen who are apt to forget to take the medicine during the day, whereas if it is given at night this forgetfulness is not so likely to occur. If the fits come on in the early morning a large dose should be given before the patient gets up and he should remain in bed for at least an hour after the dose is taken if possible. With regard to the reduction of chlorides in the diet to make the patient more sensitive to the use of bromides, although a less quantity of the bromide is necessary for daily administration, it appears to me that this plan has not sufficient evidence in its favour to warrant its use in the treatment of epilepsy, and in any case it cannot be continued for a long time in consequence of its interference with nutrition. As to the length of time during which the bromide should be administered, I am in favour of giving it for two years after the last fit in ordinary cases, and for three years in a few cases where circumstances render it necessary. During the time that the bromide is being taken by the patient it will be well to give iron tonics and cod-liver oil to maintain the nutrition. The bowels should be kept well open and occasionally high rectal saline douches should be given.

As to the treatment in colonies, which was only briefly touched upon, experience has shown that the result is most gratifying. In many cases the colonist has lived in a town and removal to the country has a good effect, because it is known that life in the open air is very necessary for epileptics. The general health is improved, the fits are diminished, and the colonists help to furnish a variety of food which is desirable in the treatment of the affection. Employment is particularly necessary, not only because it gives the colonist no time to brood over his malady, but because farm and garden pursuits bring him into the sunshine, fresh air, and other surroundings which inspire him with mental activity and hopefulness. As far as the colonial treatment of children is concerned, wherever it has been tried it has been followed with good results. A recent Act of Parliament, the Elementary Education (Defective and Epileptic Children) Act, has so far interfered with the treatment of epileptic children in colonies in England, but it is hoped that this Act will soon be modified and permit epileptic children to benefit by the treatment which is so necessary for them.

In the above remarks I have not attempted to give a full account of the treatment of epilepsy but only to make some observations which have occurred to me and which I could not state at the meeting after the papers of Dr. Russell and Sir Victor Horsley were read.

Wimpole-street, W.

ROYAL INSTITUTION. — The Friday evening discourse at the Royal Institution on Feb. 20th was delivered by Principal E. H. Griffiths of the University College of South Wales and Monmouthshire. The subject of the discourse was the Measurement of Energy, with special reference to the mechanical equivalent of heat. Joule's original determination was that 772 foot-pounds of work were equivalent to the heat required for raising the temperature of a pound of water by 1° F. Referred to the centigrade thermometer and to the units of the metric system this expression becomes $4{\cdot}156 \times 10^7$ ergs per gramme-degree. Later experiments have shown that this estimate is somewhat too low and that the number of ergs per gramme-degree centigrade is more correctly stated as $10^7 \times 4{\cdot}185$ or 4·186. Professor H. L. Callendar's apparatus for performing the experiment was exhibited in action.

THE THEORY OF RETINOSCOPY.

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As the theory of retinoscopy is very inadequately dealt with in the text-books the following, which is a complete account of its optical principles as worked out on Frost's artificial eye, may prove interesting to readers of THE LANCET.

Let L be the source of light and M a concave mirror, with its centre of curvature at C, and focus at F about 20 centimetres from M. There will be an image of L formed at I, a little above and to the right of F (see Fig. 1). Let *i* represent the image formed on the retina *b*; then it follows that retinæ in other positions, as *a*, *c*, *d*, *e*, will have diffusion-circles of light formed upon them.

If I be the far-point of the eye, then it is one of low myopia, I being distant about one metre, and the position of the retina will be that of *b*. In the other cases represented—*a*, high myopia; *c*, emmetropia; *d*, low hypermetropia; and *e*, high hypermetropia—diffusion-circles are formed proportional in size to the amount of ametropia.

When the mirror is tilted downwards (into the dotted position M_1), I goes to I_1; and *i* goes to i_1—i.e., against the mirror. Also, all the aforesaid diffusion-circles go the same way—*against*.

If M be the position of the mirror (plane), then an image (virtual) of L is formed at I (as far behind M as L is in front) and an image (real) of I is formed at *i* on the retina *b*, diffusion-circles being formed on retinæ in other positions, as *a*, *c*, *d*, *e* (see Fig. 2). When the mirror is rotated downwards to the position M_1, then I goes to I_1 and *i* goes to i_1—i.e., downwards—and the diffusion-circles go the same way. This is just the opposite of what takes place with a concave mirror (see Fig. 1). *b* is the retina of a low myopic eye, the far-point of which is at I.

Now, having seen how the retina in the observed eye receives its illumination and that this always moves *against* the concave mirror, let us omit from subsequent diagrams all the rays concerned in the formation of this illuminated area and consider only those which leave the retina, pass through the lens, and enter the eye of the observer, and we shall take the five cases mentioned and consider each separately.

(*a*) *High myopia.*—Here we have a diffusion-circle, *a b*, upon the retina, because it is further back than the focal plane of the refracting media of the eye, the rays having crossed at *i* (Fig. 1) and an image of this circle is formed in the air at $\alpha\ \beta$, as shown in Fig. 3, the construction being to draw a ray through the nodal point undeviated and another parallel to the axis, and refracted at the principal plane through the anterior focal point F. Such rays cross at $\alpha\ \beta$ and here is formed a real aerial image of *a b*. Since the observer is accommodated for the pupil and not for the image its edge appears ill-defined, as shown in the figure.

Suppose now, by a downward tilt of the mirror, *a b* is made to go to $a_1\ b_1$ (Fig. 4), then the emergent cone of rays, A F B and the image $a_1\ \beta_1$, go downwards—i.e., sweep across the front of the mirror—and presently the more or less ill-defined edge of the cone sweeps across the sight-hole and, when it is just passing, the eye behind the hole sees the light disappear downwards, followed by the concave edge of the shadow, and the field of vision—i.e., the observed pupil—at different stages of the sweep is represented by the circles 1, 2, and 3 in Fig. 3. Owing to the largeness of the diffusion-circle, *a b*, the illumination is seen to be somewhat feeble and the shadow is not very wide.

(*b*) *Low myopia.*—Here the cone of rays is not so divergent, for as we approach emmetropia they become more and more nearly parallel, the section of the cone is smaller, the illumination is brighter, and the edge of it is more curved than before and the width of the shadow is greater.

(*b*) 1. *Particular case of low myopia* in which the far-point,

FIG. 1.

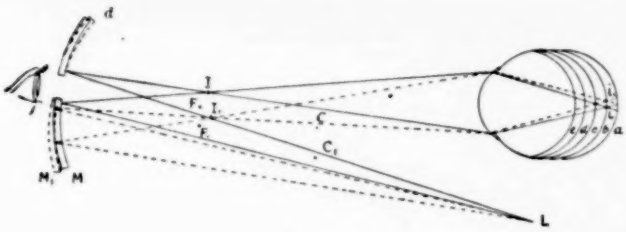


FIG. 2.

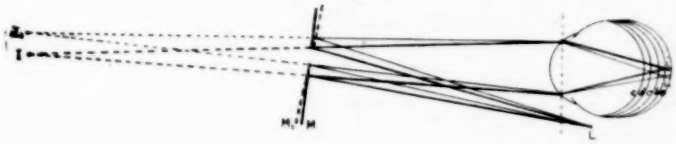


FIG. 3.

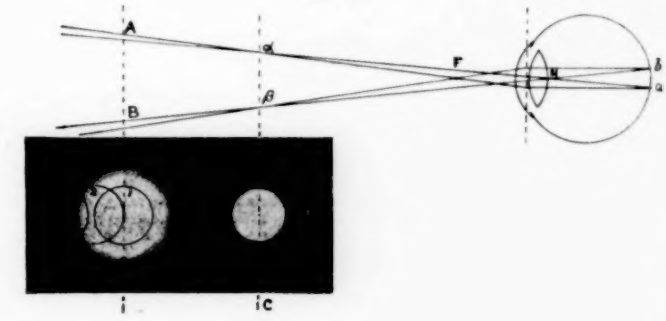


FIG. 4.

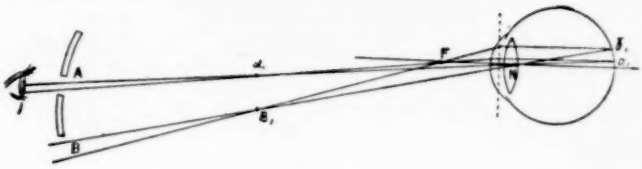
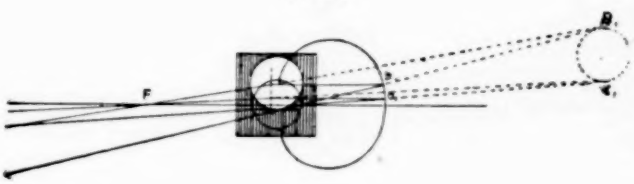


FIG. 5.

FIG. 6.



P, coincides with the focus of the mirror. On account of this coincidence there is formed on the retina of the observed eye an exact and well defined image, *i*, of F (which in its turn is an image of I., Fig. 1). Hence the rays emerge from the image in the eye along the same path as they entered, P and *i* being conjugate foci.

The shape of the emergent beam is shown in Fig. 5, and it is seen that the cone is very narrow in section and may even all be included in the sight-hole of the mirror. The illumination is a maximum and a *very slight* movement of the mirror is enough to send the cone right off the sight-hole, as shown by the dotted lines, and so the edge of the shadow is difficult to observe (be it noted that a reflected ray moves at *twice* the angular rate of the mirror).

Now, since we have assumed the distance P E to be one metre, it is obvious that a − 1 D. lens, placed in front of the eye would remove the far-point to infinity—in other words, render the rays parallel. Hence this is a case of myopia 1 D., and it may be regarded as the limiting case between movement *with* and movement *against*.

(*b*) 2. *Myopia of less than* 1 D., in which the remote point lies further away than P, is not often met with in practice, as so little inconvenience is experienced that it is hardly worth correcting, being actually a real convenience for close work like reading, &c., and cannot be accurately gauged by the method of retinoscopy, as the movements of the shadow are difficult to observe, for the same reasons as before. Such cases must be settled at the test-types.

(*c*) *Emmetropia.*—In this case the diffusion-circle of illumination is very small (see Fig. 1) and is situated at the principal focus of the eye, so that the emergent beam consists of bundles of parallel rays coming from points of light in the circle. The section of this beam is nearly the same at every point and is of about the size of the patient's pupil. The illumination, as seen by the observer, is bright, but the shadow movement, which is "against," is not easy to detect for reasons already given.

(*d*) *Low hypermetropia.*—Rays from any point of light in the circle of illumination continue to be divergent after passing out of the eye and so never cross as in case *a* (myopia), but their directions, if produced backwards, do meet and form a virtual image of the point behind the eye. This is shown in Fig. 6 and is the reason why the shadow moves against instead of with.

α β is a virtual image of *a b*. As in all the other cases when the mirror is tilted down *a b* goes up and, therefore, also, α β. In Fig. 6, a_1 b_1 is the new position of *a b*, and α_1 β_1 of α β. This is movement against. The appearance seen is represented by the shaded projection, where the lower circle represents the pupil, and the upper the virtual image α_1 β_1.

(*e*) *High hypermetropia.*—In this case the diffusion-circle of illumination is larger and the emergent rays are more divergent than in *d*. Hence, also, the virtual image α β is larger and, therefore, not so bright and being larger the shadow is more crescentic.

Wimpole-street, W.

A NEW METHOD OF TREATING FRACTURES OF THE SHAFT OF THE FEMUR.

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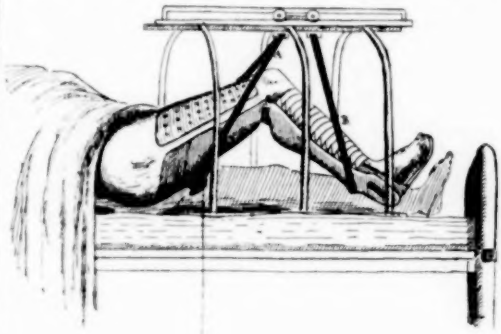
FRACTURES of the shaft of the femur are among the most difficult to deal with satisfactorily that the surgeon is called upon to treat and the results of mal-union are often very serious to the patient. Any shortening in the thigh will of necessity bring the knee-joint on that side out of alignment with its fellow and so make a difference in the level of the two knee-joints. Thus patients with shortening above the knee walk more lamely than would be the case with a similar amount of shortening below it. There are several reasons which render these fractures particularly difficult to deal with. The bone in a well-developed subject is covered by a thick layer of muscles and is a long way from the skin surface; it is, therefore, difficult to ascertain the exact position of the fractured ends with any degree of certainty and to manipulate them into position when found. The muscles pulling on the fragments are probably the most powerful in the body (the glutei, hamstrings, quadriceps, &c.) and tend to make the fractured ends override each other, besides necessitating the use of powerful extension to overcome their pull. Also, the limb below the site of fracture is long and heavy, so that almost any movement of the patient's body is liable to result in movement taking place at the site of fracture in spite of the most carefully adjusted splints. It is now a well-recognised practice to endeavour to bring the bones into place by position rather than by force and to bring the distal fragment into line with the proximal one, the joints being so bent as to relax as far as possible the muscles tending to displace the fragments. (This was particularly pointed out by Sir William Bennett in an article in the *Practitioner* for August, 1901.)

More or less powerful extension, however, is almost always necessary in treating fractures of the femur, for it is not to be expected that weights of a few pounds will overcome the pull of such powerful muscles as those involved. The best way of obtaining efficient extension is undoubtedly by making the distal portion of the leg the fixed point and allowing the body-weight to act as the extending force; powerful extension can in this way be secured by very simple apparatus. Probably the best splints at present in use which attain these objects are "the double incline plane" and "the Hodgen's splint"; in both of these the weight of the upper part of the limb tending to slide off the splint acts as the extending force. (The "double incline plane," to be efficient, should have the thigh piece at least two inches too long for the thigh.) The Hodgen's splint is, however, somewhat tiresome to adjust and entails a good deal of rather complicated apparatus, while "the double incline plane" has the twofold objection that it is very troublesome to nurse patients with and there is no means of steadying the thigh laterally. The following method, which is in a sense a modification of both, is, I venture to think, simpler and more easily managed than either, while at the same time remaining quite as efficient.

The splint is applied as follows. An extension stirrup is applied with strapping from the ankle to the knee in the usual way and the stirrup is fixed round the foot-piece of a Macintyre's splint, the thigh-piece of which should be made long enough to reach well up to the fold of the buttock. On the under side of the thigh-piece and close to its upper margin a metal hook is fixed (see illustration). The best splint for the purpose is a Macintyre made so that the length of the thigh-piece can be adjusted by means of a thumb-screw and with a flat metal hook attached to the under side. An anterior splint for the thigh is then made of Gooch's splinting, or, better, of gutta-percha, padded with a double layer of lint, and fixed to the thigh with webbings passed round the Macintyre splint. The fracture having been set the splint is now adjusted with the knee bent nearly to a right angle and the limb is fixed with bandages or webbings, as the case may be. A leather strap, which should be about an inch in breadth, is now passed through the lugs on the carriage of a Salter's cradle, then round the thigh-piece of the splint and caught in the hook on the under side. The buckle is then brought to one side and the strap is tightened until the buttock and the thigh on that side are lifted off the bed; when the strap is sufficiently tight it ought to be possible to pass the open hand beneath the buttock on the injured side. Another strap is then passed round the lower end of the splint and fixed to the cradle to support the leg; this strap must not be too tight or it will depress the upper end of the



C, Hook on splint round which strap A passes

splint. The upper strap will need tightening from time to time to make up for stretching, &c. All that is necessary in order to examine the site of fracture is to remove the anterior thigh splint.

By this method very powerful extension can be easily secured and with very little attention will remain efficient. The weight of the thigh and buttock tending to slide off the splint draws the upper fragment away from the lower; the latter is prevented from moving by the extension strapping and stirrup round the foot-piece and by the bent position of the limb.

The chief advantages of this method are: 1. The nursing is very easy, as there are no weights, &c., and the cradle is the only thing that rests on the bed. 2. There is less tendency to movement at the site of fracture than with most other methods, as if the patient moves his body or it should become necessary to move him for the purposes of nursing, the distal portion of the limb and the splint will tend to move with him rather than for the movement to take place at the site of fracture. 3. The splint is comfortable and the limb is in the natural resting position of semi-flexion. 4. The apparatus is simple and easily applied. Movement of the knee-joint can be carried out from time to time by screwing the splint straight with the key while the thigh is supported by an assistant; this can be done without undoing the splint at all. In these days, when the value of early movement and massage in the treatment of fractures is becoming recognised, it is getting more and more necessary to have some method of splinting which will enable one to get at the site of fracture, and to bend the joints without having to remove the splints, and I think that the above method will be found to be an improvement on the older ones. I have to thank Sir William Bennett for his kindness in allowing me to try this method on several cases under his care in St. George's Hospital.

Cavendish-place, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

EXPECTORATION OF A TOOTH THIRTEEN MONTHS AFTER INHALATION INTO THE LUNG.

BY W. E. CARNEGIE DICKSON, B.SC., M.B., CH.B. EDIN.

IN the middle of December, 1901, the patient, a marine engineer, aged 28 years, had 12 stumps removed from the upper jaw on two consecutive days, gas being the anæsthetic employed. He now recalls the fact that after the second day's operation he experienced a slight feeling of uneasiness

behind the sternum, accompanied by a slight cough but by no pain. This soon passed off, its occurrence being completely forgotten. Early in the following January he had a somewhat severe attack of "influenza," followed shortly afterwards by a relapse, both attacks being accompanied by severe coughing and a slight amount of expectoration of thick yellowish muco-purulent material. During the relapse he suddenly developed aphonia for several days, preceded by slight huskiness of the voice, but unaccompanied by any pain. The cough and slight muco-purulent expectoration, however, continued and in March, 1902, he had an attack of dry pleurisy over the outer aspect of the left lower lobe. On recovering from this he went to the country in the hope of hastening convalescence, but while there he was much troubled by severe attacks of coughing. The cough was dry and hard and expectoration was very scanty, but later it became somewhat more abundant. It was especially troublesome at night, often awakening the patient from sleep, and was accompanied by a feeling of irritation behind the upper part of the sternum. He also noticed that these attacks of coughing were brought on by the act of stooping, and on these occasions he sometimes brought up a considerable quantity of thin whitish sputum. In July and August he went for a six weeks' sea voyage and improved considerably in general health, the cough and thick muco-purulent expectoration, however, continuing unabated. These symptoms remained unchanged until Friday, Jan. 30th, 1903, when he had a sudden hæmoptysis while walking along the street, preceded by some coughing. He remained in bed during Saturday and Sunday and on Monday morning he again went out, but owing to a recurrence of the hæmoptysis had to return home. Shortly afterwards, while lying quietly in bed, he felt a "sort of obstruction" in the chest and coughed up a large mouthful of bright red clotted blood. In this he felt something hard, which on examination proved to be the fang of an upper molar tooth with a large cavity at its upper end, the edges of which were so sharp and ragged that it must have caused considerable damage to the tissues in which it had lain imbedded for over a year. I saw the patient last October for my father, Dr. George Dickson, Edinburgh, and neither of us for a moment suspected that the case was other than one of early phthisis, the patient at that time dating the commencement of his illness from the attacks of influenza in January, 1902, and having entirely forgotten the occurrence of the slight cough and expectoration after the extraction of his teeth in the preceding December. He was also seen by a consulting physician in Edinburgh who had his sputum examined for tubercle bacillus with negative results. The case is one of considerable interest to the dentist as well as to the physician and conveys to both a lesson worthy of remembrance.

Edinburgh.

A CASE OF TYPHOID FEVER WITH PROLONGED INCUBATION.

BY W. NORWOOD EAST, M.D. LOND., M.R.C.S. ENG., L.R.C.P. LOND.,
DEPUTY MEDICAL OFFICER, H.M.'S CONVICT PRISON, PORTLAND.

THE following case of typhoid fever appears worthy of recording, having an incubation period of at least 141 days. The patient was a convict and during the whole of this period was in H.M.'s prisons under medical supervision, and although the incubation period may have been longer than that stated it can be proved to be of at least that duration. The events preceding the convict's reception to this prison, which are of importance, are as follows. Sentenced by military court-martial in South Africa to a term of penal servitude, he was sent to Pretoria a prisoner and then to Cape Town, where he arrived about March 2nd, 1902. Seven days later he embarked for Southampton, arriving on April 1st. He then passed a few days in a military prison and was received at H.M.'s prison, Lewes, on April 21st. The medical papers of the patient to which I have access are those which accompanied him in the civil prisons and date from his reception into Lewes prison; the dates previous to this are only approximate, being furnished by the patient's memory. On his reception into Lewes prison he stated that he had not suffered from any special illness and that during the whole period of his detention there he was in perfect health. On August 25th he was transferred to H.M.'s convict prison, Portland, likewise in perfect health, well developed, and muscular; his height was six feet and half an inch and his weight was 132 pounds. He was set to work in the blacksmiths' shop. On Sept. 1st he was admitted to hospital; the outer side of the left foot and ankle were inflamed, having been chafed by an ill-fitting boot. He was discharged well on the 8th. Four days later, on the afternoon of Sept. 12th, he was readmitted to hospital, complaining of headache and shivering. On examination his pulse was rapid and his temperature was 102° F., rising in the evening to 104°; he had headache and slight bronchial catarrh, evidenced by occasional rhonchus; the abdomen appeared to be normal; the spleen was not palpable and there was no roseola; he had no diarrhœa. The tongue was slightly furred. He informed me that the day after he left hospital—that is, Sept. 9th—he had not felt well and had gradually been getting worse. On the 17th three rose spots were found on the trunk. Typhoid fever was definitely diagnosed and this opinion was confirmed by the Widal reaction. On the 19th the laboratory report of the Clinical Research Association was received, to the effect that tests made from the patient's serum with dilutions of 1 in 10, 1 in 25, and 1 in 50 gave positive reactions. The patient is now well, having passed through a moderately severe attack of typhoid fever with relapse; he had occasional retention of urine and at one time signs of cardiac failure caused anxiety; "tender toes," with signs of a local neuritis, lasted for a few days, but the cold bath treatment had not been used.

As soon as the diagnosis was made it befell one to endeavour to trace the origin of the attack. Dr. W. A. Dow, medical officer of Lewes prison, reported that there was no typhoid fever in that prison and further kindly reported (Dec. 19th) that the medical officer of health of Lewes had had no case notified since March 20th. At Portland prison there had been no typhoid fever for some years and Dr. D. J. Lawson, medical officer of health of Portland, kindly reported that no case had been notified to him for six months before our patient was attacked. It has been an isolated case and so could not have been due to diet, all of which, except water, milk, and cheese, is cooked before being served. Had it been so with a convict population of over 700 some other case would certainly have occurred. The result of a bacteriological examination of the milk- and water-supply carried out at the Government laboratories was negative. It was therefore impossible for infection to have taken place at either this or Lewes prison. It transpired that on the journey from the latter to this prison, the prisoners being transferred, the patient and three other convicts were given a glass of water to drink at Weymouth station. Could this have caused the infection? The three other convicts have remained in perfect health and Dr. T. H. Jones, medical officer of health of Weymouth, kindly informed me that no case of typhoid fever was notified to him in July, August, or September. The patient could not, therefore, have been infected by this glass of water. It is obvious that infection took place at some date previous to reception into Lewes prison. The patient himself considers that infection took place at Pretoria, but of course this is only a supposition; there was little illness on the ship in which he came to England and his kit was used only by himself. This case is reported with the permission of the Directors of Convict Prisons.

Portland rison Hospital.

CASES OF ASSOCIATED PNEUMONIA AND PSEUDO-DIPHTHERIA.

BY JOHN REID, M.D. ABERD.

IT is well known that various cocci, more particularly streptococci, staphylococci, and pneumococci, are almost always found associated with the Klebs-Löffler bacilli in diphtheria and it is also recognised that several morbid conditions are attended with the formation of membrane or exudate more or less resembling that of diphtheria but entirely independent of the Klebs-Löffler bacillus. The organisms present in the last-mentioned class of cases are streptococci, staphylococci, diplococci, and the bacilli of pseudo-diphtheria. These bacilli resemble the Klebs-Löffler bacilli to some extent but can be distinguished from

them by a variety of tests. The following cases are interesting as examples of pseudo-diphtheria preceding or following an attack of pneumonia.

CASE 1.—The patient was a boy, six years of age, who suffered from pneumonia accompanied with croupy spasmodic cough, which persisted until after the lapse of 14 days he had an attack of measles running a normal course and attended with but slight tonsillitis. After the measles he had another attack of pneumonia which cleared up in a few days. The entire pharynx was subsequently covered with a dense grey membrane which disappeared after 24 hours. No diphtheria bacilli were found in it but only cocci. There was otorrhœa preceding and following the attack of measles.

CASE 2.—The patient was a man, aged 37 years, who suffered from pneumonia which was followed by rheumatism. While abroad he had contracted dysentery and his bowels were washed out by enemata on account of constipation. His tonsils were slightly affected; a membrane identical with that presented in Case 1 was formed on the pharynx and disappeared within 24 hours, leaving small ulcers. This false membrane, unlike that of diphtheria, was non-contagious.

CASE 3.—The patient was a girl, aged six years, a swab from whose throat gave indications of the pseudo-diphtheria bacillus when examined at the Jenner Institute by request of the Wandsworth sanitary authority. Bronchitis followed.

CASE 4.—This patient was a sister of the preceding one, was similarly affected, and had a sharp attack of pneumonia six days afterwards. A memorandum from the medical officer of health stated that such cases "end in recovery and are not followed by sequelæ."

Southfields, S.W.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Latent Empyema in Infants.

A MEETING of this society was held on Feb. 24th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. S. VERE PEARSON read a paper on Latent Empyema in Infants. He said that empyemata were latent in infants sometimes because of the meagreness of pulmonary symptoms, or an empyema cavity might be overlooked because it was the second of two such cavities. Besides these latent empyemata there was another variety of empyema which was particularly likely to be overlooked and it was with this variety that the present paper dealt. The cases belonging to this group were characterised by the occurrence of a small sacculated empyema giving rise to progressive wasting and anæmia and to secondary complications of a grave nature. The onset usually was gradual and the course of the disease was long. An irregularly raised temperature with few symptoms pointing to disease of the respiratory system was common. The physical signs in an uncomplicated case were not well marked, and this paucity of physical signs depended on the size, chronicity, and site of the empyema. The commonest situation was at the extreme posterior base in the vertebral groove. Here ill-defined signs were often obscured by the liver or the stomach interfering with the normal pulmonary resonance. The signs varied often from day to day and a slight impairment of resonance to percussion was sometimes the only sign present. The physical signs in cases with secondary pulmonary complications and with complications other than pulmonary were then dealt with. The differential diagnosis from marasmus depended on the fact that digestive derangements were common but were not so severe as to account satisfactorily for the progressive deterioration in the general condition of the patient. A continuously and irregularly raised temperature, often reaching 103° F., was not common in chronic wasting children. The diagnosis from tuberculosis was often extremely difficult, but the variability of the signs, the signs themselves, and the long delay of the fatal issue in spite of high fever were points of difference between these cases and the majority of cases of tuberculosis in infants. The differential diagnosis of cases with complications from chronic broncho-pneumonia or from purulent pericarditis and other such conditions arising primarily or secondarily to diseases other than empyema was usually very difficult. The secondary effects were, firstly, indirect or toxæmic, the result of the presence of a localised collection of pus, and gave rise to general symptoms—anæmia, wasting, rise of temperature, and pulmonary complications—and locally to thickening of the pleura and fibrosis of the lung; and secondly, direct or bacterial, the result of the spread of the infective agent either locally or by the blood, giving rise (1) locally to purulent pericarditis (and peritonitis) and (2) by blood infection to purulent meningitis, peritonitis, arthritis, and other pyæmic abscesses (and pericarditis). The prognosis was bad; the majority of patients died. The cause of death was usually one of the serious complications, those belonging to the bacterial group. This high mortality depended partly upon the infrequency of correct diagnosis but also partly upon the difficulties of treatment. The questions to decide with respect to treatment were when to explore, where to explore, and how often. Much depended upon the certainty of the diagnosis and the progress of the case. The advisability of exploratory rib resection must be considered in certain circumstances. Six illustrative cases of the condition were quoted.

Dr. F. DE HAVILLAND HALL said that the paper drew attention to a class of cases which were frequently overlooked. He himself always feared the possibility of missing a small empyema and indorsed the opinion of Dr. Pearson that it was only by repeated examination of the chest in these cases that such an error was to be avoided. With regard to the interlobular forms of empyema he considered that diagnosis was impossible, for in many of these cases there was only a thin layer of pus between the lobes of the lung. The diagnosis was easier in the basal cases and should always be completed by the insertion of the exploring needle. He alluded to a case in which in a debilitated child after pus had been withdrawn from the chest and a rib had been resected the child had died apparently as the result of the operation. He considered it advisable in doubtful cases to make many explorations with the needle and he did not think the insertion of the needle gave rise to much pain. He alluded to the advantages to be gained by the use of the x rays in some cases and quoted a case in which this method of diagnosis had been of the greatest advantage. He asked Dr. Pearson if albumose had been present in the urine of any of his cases.

Dr. H. S. FRENCH mentioned the diagnostic value of the presence of leucocytosis in differentiating cases of empyema from those of tuberculosis. He asked Dr. Pearson if examination of the blood had been made in his cases.

Dr. G. A. SUTHERLAND said that the difficulty in diagnosis of the form of case described in the paper was very great. He thought that the term "latent" had been used in the paper to embrace more than one class of case. The only forms of case to which he would apply the term "latent" were those cases in which on careful examination no physical signs could be discovered. He considered that repeated exploration in cases in which pus was suspected was advisable and that in those cases in which there was reason to suspect its presence resection of a portion of a rib should be performed and every part of the lung could then be explored.

Dr. F. E. BATTEN said that he did not think it was possible to make the complete exploration of the lung after the resection of a rib suggested by Dr. Sutherland, for in these cases owing to their chronicity the pleural adhesions were considerable and little was gained unless the cavity of the empyema was opened. He doubted if the presence or absence of leucocytosis was of much diagnostic value and quoted a case in which there was no leucocytosis but at the necropsy an empyema was found. He attached considerable diagnostic importance to the history of an acute or rapid onset in these cases. He asked Dr. Pearson if any other organism except the pneumococcus had been found in his cases.

Dr. H. W. G. MACKENZIE thought that in most cases there was a history of acute onset. He was of the opinion that exploratory puncture was often unsatisfactory and that resection of a rib should be done in any doubtful case, and he described two cases in which exploration had failed to find pus but on resection of a rib pus had been found and evacuated.

Dr. G. NEWTON PITT referred to cases of empyema in which the temperature was normal or subnormal throughout the whole course of the disease. He thought that in doubtful cases some aid might be obtained by pinching up the skin on the two sides of the chest, when it would be found that the

connective tissue on the affected side was fuller and contained more fluid than the skin on the opposite side. He did not think that all these cases of empyema went on to a fatal termination but that some of the patients ultimately recovered without operation. He thought that those cases which were due to streptococci very generally proved fatal. He considered that leucocytosis was of some value in diagnosis and referred to two cases in which it was present and after repeated examination pus was at length found.

Dr. PEARSON, in reply, said that the evidence obtained from leucocytosis was very uncertain owing to the many complicating factors. He thought that the x rays were of great value although he had not himself used them. He had not examined the urine for albumose. He thought that the infection might in some cases be streptococcic but was much more generally pneumococcic. He had never observed the œdema of the skin on the affected side.

MEDICAL SOCIETY OF LONDON.

Hæmorrhagic Typhoid Fever.—Spasmodic Contraction of the Pylorus.

A MEETING of this society was held on Feb. 23rd, Mr. A. PEARCE GOULD, the President, being in the chair.

Dr. J. KINGSTON FOWLER and Mr. A. G. R. FOULERTON communicated a paper on Two Cases of Hæmorrhagic Typhoid Fever. The occurrence of cases of a hæmorrhagic type was recognised in all the infective fevers, in some of which—e.g., typhus fever and small-pox—it was common, while in others, like enteric fever, it was rare. In the two cases which formed the substance of this paper careful bacteriological observations had been made and on that ground they appeared to be worthy of record. The first case occurred in a man, aged 20 years, who was admitted to the Middlesex Hospital under the care of Dr. Fowler on Jan. 6th. On Dec. 27th he suffered from headache and had attacks of shivering. On Jan. 20th the appearance of "tender toes" lent support to the view that the case was one of enteric fever, in spite of the doubtful results of bacteriological examination and the absence of Ehrlich's reaction. On Jan. 22nd he had an attack of epistaxis; he also vomited blood and passed blood in the urine and a patch of ecchymosis appeared in the lobule of the ear which had been pricked for the blood test. In referring to the bacteriological examination, the negative results obtained from the blood test on Jan. 7th, 14th, and 25th were noted. Pure cultures of bacillus typhosus were, however, obtained from: (1) a sample of blood and urine drawn off with a sterilised catheter on Jan. 24th; (2) from five cubic centimetres of blood drawn off by a syringe from the basilic vein; and (3) blood taken from the spleen after death. Case 2 occurred in a man, aged 23 years, who was admitted on Dec. 16th with a history of 14 days' illness accompanied by pyrexia. On Dec. 23rd blood appeared in the sputum and urine. Ecchymoses appeared in various parts of the skin and there were hæmorrhage from the pharynx and blood in the stools. The patient died on the twenty-eighth day of the illness. At the necropsy hæmorrhages were found in the pelvis of the kidney and various other situations. Pure cultures of bacillus typhosus were obtained from the heart blood and spleen. In the gall-bladder and in some of the muscles the bacillus coli communis was also detected. Turning to the question of etiology, which still remained undecided, the title of a paper on this subject by Nicholls and Learmonth of Montreal[1] "The Hæmorrhagic Diathesis in Typhoid Fever and its Relationship to Purpuric Conditions in General," appeared at first sight to suggest that the authors considered that a close connexion existed between this condition and hæmophilia, but this was not so. In two cases recorded by Eshner and Weisenberg[2] there was a marked history of alcoholism. It had been suggested by Gerhardt[3] that such cases had become more common since the introduction of the cold bath treatment. This was not in accord with the experience at the Middlesex Hospital. These two cases, Dr. Fowler and Mr. Foulerton feared, threw but little light upon the pathology of this condition. Case 1 certainly showed that in an example of the most intensely severe form of hæmorrhagic typhoid fever no other organism than the bacillus typhosus might be present and that the mixed infection which had been observed in other cases and which was present in Case 2 was not an essential feature. It appeared from a review of all the facts that as stated by Eshner the hæmorrhages were probably due to changes in the blood or in the vessels, or in both; and that such changes were induced either by the infective or toxic activity of the typhoid bacilli or by both of these factors combined. Mr. Foulerton added, as regards the failure to obtain Widal's reaction in either case, that if a case did not give the reaction after 12 days' illness it was either not a case of enteric fever or it was one of extreme severity. As to the cause of the hæmorrhagic complication it had been stated that this was due to mixed infections. This was certainly not so in the first of these two cases.—Dr. A. E. WRIGHT confirmed Mr. Foulerton's remarks relative to the non-occurrence of Widal's reaction in very severe cases of enteric fever. He thought the bactericidal power of the blood might have been investigated. This was a point of practical importance and could be easily investigated in the laboratory. Turning next to the etiology of the hæmorrhage in these cases he did not believe they had to do with the hæmorrhagic diathesis or with alcoholism, though the ready way in which hæmorrhage occurred after injury in the two cases recorded resembled both of these diseases. Now there was an obvious change in the blood in hæmophilia—namely, diminished coagulability. The introduction of typhoid vaccine also diminished the coagulability of the blood and Dr. Wright suggested that the cause of the hæmorrhages in hæmorrhagic typhoid fever was an intense intoxication of the blood with the typhoid bacillus. The degree of intoxication could be easily measured by drawing off a drop of blood and counting the number of bacilli per cubic millimetre. A diminished alkalinity of the blood was another cause of diminished coagulability, and he suggested that in future such cases should be tested in both of these respects. In regard to treatment calcium chloride would probably have been of no use. Calcium chloride was only of advantage by combining with the fibrinogen in the blood, but in enteric fever the latter was decomposed and therefore diminished or wanting.—Dr. ARTHUR VOELCKER asked if the degree of coagulability had been estimated in these cases. He referred to a case of gastric ulcer with hæmorrhage in which the degree of coagulability was markedly diminished.—Dr. FOWLER and Mr FOULERTON replied.

Dr. S. H. HABERSHON read a paper on Spasmodic Contraction of the Pylorus, its Diagnosis and Treatment. After some preliminary remarks on the normal peristaltic movements of the stomach, he described certain cases of acute and subacute dilatation of the stomach in which spasm of the pylorus was probably present though it might be a matter of conjecture. An important series of cases existed in which some disease, either gastric ulcer or early malignant disease, occurred in the near neighbourhood of the pylorus. The symptoms produced were definite and characteristic, and it was a common occurrence to find that the cause was not recognised. Variable dilatation of the stomach was always present. Symptoms of pain, discomfort, or even vomiting were especially manifest in the evening or some hours after food. Pain was usually relieved by food and this was considered an important element in diagnosis. The distinction between these symptoms and those of pyloric obstruction was emphasised. In most cases the diagnosis was confirmed by operation and on this ground it was contended that in the absence of organic obstruction spasm of the pylorus was present. In the treatment lavage was beneficial but gastro-enterostomy produced brilliant results and in non-malignant cases was invariably successful. Some cases were related in illustration of the foregoing points. Dr. KINGSTON FOWLER remarked on those cases in which food relieved instead of increasing the pain. This kind of pain could not be associated with ulcer of the stomach. This pain was different from the sinking sensation which came on about four hours after food and which was due to gastric dilatation. Turning to the treatment, if dietetic means failed operative procedures were often successful. He also referred to severe cases which nothing but gastro-jejunostomy could relieve.—Sir ISAMBARD OWEN also discussed the character of the pain and agreed with Dr Habershon that the position of the stomach lesion modified the character of the pain a good deal. He thought that the source of dilatation of the stomach due to reflex spasm sometimes lay in the colon when the latter was the seat of a colitis.—Mr. ARTHUR BARKER asked how those strictures could be explained which

[1] Brit. Med. Jour., Feb. 2nd, 1901, p. 305.
[2] American Journal of the Medical Sciences, March, 1901; Brit. Med. Jour., Feb. 2nd, 1901, p. 309.
[3] Zeitschrift für Klinische Medicin, Band x., S. 201.

were due to an ulcer situated at a considerable distance from the stricture. He expressed a preference for gastro-jejunostomy done without any mechanical appliances.—Dr. WALTER BROADBENT referred to a case of a man who vomited large quantities of fluid and in whom there was great dilatation, and in the analysis of whose stomach contents there was marked increase in the hydrochloric acid. Washing out with weak tannic acid solution produced good results.—Dr. W. J. TYSON thought that the cases described by Dr. Habershon belonged to a distinct class. He advocated rest for their treatment.—The PRESIDENT had seen several of Dr. Habershon's cases and in these rest had been tried before operation. Most of the speakers had admitted that spasm of the pylorus could be produced by various kinds of irritation and could result in very considerable dilatation. These were bad cases for operation. However, gastro-jejunostomy was an admirable means of treating them in many instances. Mr. A. W. Mayo Robson's bone bobbin was preferable to any other mechanical means in his opinion.—Dr. HABERSHON replied.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Chorio-epithelioma Malignum.—Colotomy and Colectomy.

A MEETING of this society was held on Feb. 12th, Mr. RUSHTON PARKER, the President, being in the chair.

Dr. EDGAR STEVENSON showed a case of Congenital Glaucoma in a child, aged five years, and described in detail the etiology and pathology of the condition. The patient presented all the typical appearances, the eyes being uniformly enlarged with the cornea 18 millimetres in horizontal diameter. The optic discs were cupped and atrophic, and the visual fields were much contracted. Out of 65,000 patients seen in recent years at the Liverpool Eye and Ear Infirmary the disease had appeared four times.—Dr. K. A. GROSSMANN and Mr. C. G. LEE commented upon the case.

Mr. J. E. MCDOUGALL showed a case of Adherent Soft Palate which had been successfully treated by a new method. A thin plate of metal was attached to the patient's artificial tooth-plate and to the extremity thereof a tube was soldered. The tube was passed through an opening in the soft palate made to admit its passage. Healing had taken place and the edges had become covered with epithelium. The patient removed and replaced the arrangement as readily as she did the ordinary tooth-plate before any addition was made to it. When no tooth-plate was worn a carrier for the tube could be fixed to the teeth. The apparatus gave no trouble and the result was most satisfactory. Nose breathing was carried on comfortably, the sense of smell had returned, and that of taste had regained its full value.—Dr. PHILIP NELSON spoke with regard to the case.

Mr. G. A. HAWKINS-AMBLER read a note on Chorio-epithelioma Malignum. He thought that Marchand's work had proved the origin of the growth from the whole of the epithelial covering of the chorionic villi. The history of a woman (aged 39 years and the mother of 12 children) who had suffered from the disease was given in detail. The last of three abortions occurred in May, 1900, and was accompanied by severe hæmorrhage. The uterus was curetted and packed. Six weeks later, on the occurrence of furious bleeding, the uterus was again packed and subsequently was thoroughly scraped with a sharp spoon. The uterus was smooth and measured three inches. On June 17th, 1902, a uterine swelling was present extending to within one and a half inches of the umbilicus. There was a steady chocolate-coloured discharge and the patient was anæmic and breathless. No radical treatment was possible. No regular post-mortem examination was obtained and no metastatic growths were found. The case was interesting owing to the long interval since the last pregnancy and the thorough curettage then done. Packing with gauze and adrenalin solution had been less effective than with gauze soaked in hamamelis extract.

Mr. F. T. PAUL read a short paper on Colotomy and Colectomy. He considered the former operation was becoming more popular chiefly owing to the better artificial anus now generally obtained. In regard to the latter he still strongly advocated bringing the ends of the bowel out with subsequent restoration of continuity in preference to end-to-end union. The latter was more satisfactory to the surgeon when the patient recovered but the risk was much greater. Patients illustrating the results of the operations were shown and also the plug and belt used by Mr. Paul for colotomy cases.—The PRESIDENT, Sir WILLIAM M. BANKS, Dr. W. ALEXANDER Dr. H. BRIGGS, Dr. F. HEATHERLEY, and Mr. K. W. MONSARRAT spoke and Mr. PAUL replied.

Exhibition of Specimens, Photographs, and Drawings.—Ringworm of the Cat infecting Children.

A meeting of the Pathological and Microscopical Section of this society was held on Feb. 19th, Mr. RUSHTON PARKER, the President, being in the chair.

Dr. W. ALEXANDER exhibited (1) specimens from a case of Abscess of the Liver following Dysentery; and (2) the Organs of a second case of Liver Abscess secondary to an Appendicitic Abscess.

Dr. R. G. HENDERSON exhibited the Anterior Half of a Tongue spontaneously amputated by a rapid ulcerative process which examination showed to be epitheliomatous.

Dr. R. J. M. BUCHANAN showed specimens of Bilharzia Hæmatobia from Urine.

Sir WILLIAM M. BANKS exhibited sections from a case of Spindle-celled Sarcoma of the Breast and photographs of two patients with large Tumours of this description. He remarked that they were not, as a rule, clinically malignant and for the most part there was no recurrence after removal.

Mr. G. P. NEWBOLT showed (1) a Liver with a Tropical Abscess from a dysenteric patient; and (2) a Tuberculous Kidney in the early stage of the disease successfully removed by lumbar nephrectomy.

Mr. C. H. B. SHEARS and Mr. E. M. STOCKDALE showed a Melano-sarcoma of the Choroid which had perforated the sclerotic; the growth was of the spindle-celled variety.

Mr. C. G. LEE and Mr. STOCKDALE showed sections from two cases of Epithelioma of the Pinna.

Dr. J. WIGLESWORTH showed (1) a Brain with Numerous Melano-sarcomatous Nodules; these were merely part of a very wide diffusion of similar deposits all over the body; and (2) a specimen of Horse-shoe Kidney.

Dr. J. E. GEMMELL exhibited the Ovaries of a patient, both organs being affected with carcinoma and cystic disease.

Mr. R. J. HAMILTON showed an Eyeball containing a Leuco-sarcoma of the Choroid and microscopical sections of the same.

Dr. R. C. DUN showed a Sarcoma of the Kidney removed by operation from a child aged three years.

Sir WILLIAM BANKS exhibited a number of casts, drawings, and specimens of Parotid Tumours. He remarked that with regard to the innocent variety the commonest were of the mixed type. Of the malignant varieties he thought that sarcoma was rare but that carcinoma was not at all uncommon and he showed a patient from whom he had removed a large growth of this type. The intention of the note was to point out the frequency with which apparently innocent parotid tumours become malignant. Details were given of three cases in which this had occurred in spite of the fact that the growths had remained small, painless, and moveable for long periods. He thought that there should be no delay in the removal of parotid tumours however harmless they might be in appearance. He had been taught to consider parotid tumours as among the least dangerous in the body, but he now regarded them with grave suspicion. He considered it undoubted that there was a great general increase in cancer among civilised nations and it seemed not improbable that this proneness to degeneration in parotid tumours was part and parcel of that tendency.

Dr. LESLIE ROBERTS read a note on an example of Trichophyton in the Cat. The animal was infected in Egypt; 20 days after leaving this country the cat was taken to a house where there was a large family of children. A few days later ringworm was observed on the neck of the eldest daughter; within a month 14 individuals were accidentally infected with the fungus as were a kitten and a Skye-terrier. The infection was subsequently communicated to a school.

The following members took part in the discussion of the specimens: the PRESIDENT, Dr. T. R. BRADSHAW, Dr. ALEXANDER, Mr. HAMILTON, Mr. W. THELWALL THOMAS, Mr. F. C. LARKIN, Mr. STOCKDALE, Dr. BUCHANAN, and Mr. K. W. MONSARRAT.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Some Experiences in the Gynæcological Surgery of the Abdomen.—The Treatment of Uterine Fibro-myomata.

A MEETING of this society was held on Feb. 11th, Dr. JAMES RITCHIE, the President, being in the chair.

Sir J. HALLIDAY CROOM showed (1) four recent cases of Vaginal Hysterectomy with special reference to Cancer; (2) a Large Fibroid in a case of seven months pregnancy removed by Porro-Cæsarean section; (3) a Fibroid Tumour which continued to grow rapidly after removal of the ovaries four years previously; and (4) a Double Hydrosalpinx removed for dysmenorrhœa.

Dr. D. BERRY HART showed (1) a Fibroid Tumour developing mainly in the left broad ligament; and (2) a Pyosalpinx in which cultures showed that the pus was sterile.

Dr. G. SCOTT MACGREGOR showed a Fibro-sarcoma of the Uterus removed by panhysterectomy. The fundus of the uterus occupied the left hypochondrium.

Dr. D. J. GRAHAM showed a large Ovarian Tumour and Uterus removed by hysterectomy.

Mr. G. ROBERTSON (Dunfermline) showed an Aborting Tubal Mole and a Parovarian Tumour removed from the same patient.

Dr. J. HAIG FERGUSON read a paper on Some Experiences in the Gynæcological Surgery of the Abdomen. In one case, where removal of the ovaries for intolerable dysmenorrhœa was undertaken, the operation had to be abandoned, as during the separation of adhesions and drawing the ovary to the surface the patient manifested all the symptoms of death from syncope. She was with difficulty resuscitated and more anæsthetic was given, as it was thought that the syncope was due to a deficient amount. But a second and a third attempt were followed by the same collapse and the operation was abandoned. In extra-uterine gestations retention of urine was a prominent symptom and with over-distension of the bladder the case might be mistaken for an ovarian tumour. Dr. Ferguson had found the opposite tube diseased in several cases, in two containing pus. Severe metrostaxis after operation for extra-uterine gestation occurred on the fourth day in one case to the extent of endangering life. After abdominal operations where no drain had been left in and where there was reason to fear the presence of innocuous fluid it was helpful to raise the foot of the bed so as to spread the fluid over a larger area of peritoneum and thus to hasten absorption and to prevent it accumulating in the pelvis. This tilting of the bed lessened any tendency to congestion of the pelvic veins and to oozing. If there was a vaginal drain then the head of the bed should be elevated. After a case of abdominal operation he received a message from the medical man in charge that there was evidently peritoneal bleeding. Dr. Ferguson replied that the lowest stitch in the wound should be taken out to see if there was hæmorrhage. The next day on taking off the dressings he found a coil of small intestine lying outside the abdomen. The medical attendant had taken out one stitch after the other in search of the hæmorrhage and left the wound unclosed. The patient was anæsthetised, the intestines were sponged, and the stitches were reinserted with a favourable result. In two cases keloid developed in the abdominal wound and was found to be best treated by the continuous application of ichthyol collodion.

Dr. F. W. N. HAULTAIN read a paper on the Treatment of Uterine Fibro-myomata, with a record of 28 consecutive successful cases of abdominal hysterectomy by the supravaginal method. At the present time they seemed to be in the transition stage between the older practice of medical alleviation and the opposite extreme of excessive surgical zeal begotten of novelty. The treatment of uterine fibro-myomata might be divided into symptomatic and radical. The former embraced the exhibition of drugs, the employment of electricity, and the removal of the uterine appendages, and the latter included the operations of myomectomy and hysterectomy. The medicinal treatment practically resolved itself into the exhibition of ergot which, from its action in stimulating the contraction of unstriped muscle, was of special value in bleeding from the uterus. It caused contraction of the arterioles and also of the muscular fibres in the uterine wall; by this means fibro-myomata in the walls of the uterus had their nutrition impeded and they were extruded into the uterine cavity or beneath the peritoneal covering. But its effects on the tumour were trivial even after prolonged treatment, so that its value was practically *nil*. Dr. Haultain then discussed the electrical treatment which he had used largely. He confined his remarks to the after-history of a series of 22 cases reported in 1896. He had traced 15. Five of these had reached the climacteric; four remained cured; two had return of the bleeding (one of these expelled a large polypus and the other had three small polypi removed and afterwards oöphorectomy performed); in two the tumour continued to grow to such a size that hysterectomy was recommended; and two had evidently undergone malignant degeneration. Removal of the appendages was undoubtedly of great service in the treatment of hæmorrhage and in inducing a premature menopause and so promoting atrophy of those growths which normally occurred after the climacteric. It was restricted in its application by its impracticability in many instances and also by the fact that it failed to produce the expected benefit in about 15 per cent. of the cases. In the soft œdematous type of fibroid this treatment seemed to be valueless and should never be attempted. The sphere for this operation had become limited, as the more radical operations were performed with safety and with certainty of cure compared with a 15 per cent. risk of failure. Radical treatment was represented by myomectomy and hysterectomy, either of which might be undertaken by the vaginal or abdominal route. Vaginal myomectomy embraced the removal of stalked growths or submucous polypi and might be very easy if they were only attached by mucous membrane or difficult if they were encapsuled by a thick layer of muscle. Before the days of antiseptics myomectomy for sessile submucous fibroids was most dangerous and rarely attempted. Now it could be undertaken with safety and was chiefly applicable to the cases where the cervix had already been dilated by the downward growth of the tumour. Abdominal myomectomy at one time was almost entirely confined to the removal of pedunculated subserous tumours, but was now largely employed for the removal of sessile subserous and interstitial and even large submucous growths. It was, indeed, a debateable question how far conservative surgery warranted them in proceeding on those lines, but some operators had removed as many as 15 nodules from the uterus by this means. The risks of such a prolonged operation and the questionable usefulness of the organ afterwards made him ponder whether the best interests of the patient would not have been served by the removal of such a focus of neoplasms. Hysterectomy or removal of the uterus was called for when the tumour or tumours gave rise to urgent symptoms and could not be efficiently treated by the previous methods mentioned. It might be performed by the vaginal or abdominal route, according to the bent of the operator. A number of operators favoured the vaginal method for all tumours less than of the size of a six months pregnancy and based their predilection on the low mortality, absence of shock, quicker convalescence, and the avoidance of an abdominal scar. Others preferred the abdominal route as giving a better view of the operation area and greater ability to deal with complications as they might arise. It seemed rather a matter of individual selection; Dr. Haultain had confined himself to the latter. When the abdominal route was chosen two methods might be employed—entire removal of the organ (panhysterectomy) or amputation through the cervix or lower uterine segment (supravaginal method). The adoption of one or other of these methods was usually very much one of individual taste. Those who favoured the supravaginal method supported its adoption mainly on the ground of its greater rapidity and the support given to the pelvic floor by the preservation of the cervix with its vaginal attachment; while the disciples of panhysterectomy advanced its superiority on the principles of peritoneal drainage and the impossibility of secondary cervical cancer. Panhysterectomy averaged fully from 20 to 30 minutes longer in its execution than the supravaginal method which itself took from 40 to 60 minutes in an uncomplicated case. Drainage could be easily effected in either method. The chance of secondary malignant disease was too remote to consider; indeed, from statistics the half hour of extra time would on these grounds be better spent in removing the mammæ which were more liable to malignant disease than was the cervix. Dr. Haultain had performed hysterectomy on 32 cases—28 by the supravaginal method and four by panhysterectomy; two of the

latter were by selection for experience and two on account of sarcomatous degeneration of the growth. The operation was undertaken in the 32 cases: for hæmorrhage in 20, pressure in seven, abdominal prominence in three, pregnancy in one, and malignancy in one. Pathologically they might be classified as multinodular 20, calcareous one, œdematous seven, cystic one, with carcinoma one, and sarcomatous two. An interesting point in the case complicated with pregnancy was the fact that the placental site was placed over the seat of the tumour; this probably accounted for the fact that an attempt to induce abortion was futile, the tumour preventing contractions of the uterine wall on the placental site. The calcareous growth was removed from a patient, aged 69 years, on account of painful pressure. In operating Dr. Haultain preferred to ligature both ovarian and uterine arteries before amputation of the uterus in simple cases. As far as possible he attempted to ligature the uterine arteries at the point where they commenced to ascend the side of the uterus, transfixing a small portion of the uterine wall and including it in the ligature; by this means all chance of tying the ureter was avoided. He did not pay any attention to disinfection of the cervical canal and did not attempt to avoid passing the sutures through it as recommended by some operators. Out of the 32 cases one only proved fatal; it was a case where panhysterectomy was performed for a very large sloughing intra-uterine tumour and death was due to septic poisoning. All the other 31 patients recovered. There was a singular absence of shock after the operation even in patients reduced by extreme bloodlessness. Convalescence was much more rapid than even after a simple ovariotomy. If the ovaries appeared to be healthy Dr. Haultain left them to obviate the harassing symptoms of an artifically induced menopause. If a fibroid gave rise to no symptoms it should be left alone as far as surgical treatment was concerned; the possible chance of its becoming malignant was too remote to receive consideration. On the other hand, whenever marked symptoms appeared treatment was urgently demanded, as the general tendency was for them to continue and to become aggravated unless the climacteric supervened. In suitable cases Dr. Haultain considered that electricity should have more deference given to it as it could be used in cases where the patient resolutely refused operation. It seldom failed in interstitial tumours. Removal of the ovaries failed in 15 per cent. of the cases, whereas the radical operation effectively cured. The mortality with the latter was 6 per cent. according to some statistics, but that was questionable.

These papers were discussed by Sir J. HALLIDAY CROOM, Dr. HART, and Dr. J. LAMOND LACKIE.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Exhibition of Specimens.—X-Ray Photography.

A MEETING of this section was held on Feb. 6th, Professor ALEXANDER FRASER being in the chair.

Dr. E. H. TAYLOR showed two specimens of the Newly-born Infant to demonstrate the Topographical Anatomy of the Stomach and other Abdominal Viscera.

Professor FRASER showed two cases of Congenital Absence of the Left Lateral Half of the Diaphragm. One case occurred in a male fœtus which was at about the fourth month and was otherwise perfectly normal. The under surface of the left lung lay upon the suprarenal capsule, the stomach, and the left lobe of the liver. The left free margin of the central part of the diaphragm ran as a strong band from front to back, slightly external to the pericardial sac and above the left suprarenal capsule and kidney. The other case occurred in a full-time female fœtus and was only one of many abnormal features that were present. The left pleural cavity contained the lung and several coils of the small intestine (which was well developed), and the left lobe of the liver projected into it. This cavity also communicated with the pericardial sac, the upper half of the left wall of this sac being absent. Between the two pleural sacs dorsal to the heart, but more to the right than the left, a large cavity was found containing a well-developed stomach, pancreas, and spleen.

Dr. TAYLOR and Dr. E. J. M. WATSON made a communication on the Value of X-ray Photography in connexion with the Structure of Bone. Dr. Taylor dwelt specially on the temporal bone in connexion with operations for the results of suppurative middle-ear disease. Dr. Watson exhibited many beautiful skiagrams showing the structure of different bones.

Dr. W. S. HAUGHTON made a communication relative to the Anatomy of the Skull Stereoscopically Demonstrated by the X Rays. He said that the difficulty of interpreting a single skiagram arose from several causes. The x-ray picture was an example of uniplanar projection of multiplanar objects. This caused superposition of shadows. Then the fact that the x rays formed a diverging cone caused magnification and obliquity distortions. These sources of inaccuracy in the "single picture" were eliminated by the beautiful stereoscopic method of Roentgen photography first described by Mr. J. Mackenzie Davidson. By this method a reproduction of the skull could be obtained, perfect in contour and perspective. Dr. Haughton then showed by diagrams on the blackboard how all the above-mentioned sources of inaccuracy were eliminated in the stereoscopic method and afterwards in the reflecting stereoscope showed prints of the base of the skull and lateral views in which general points were well demonstrated, including the relations of the groove for the lateral sinus to the mastoid air cells, the mastoid emissary vein, the internal auditory meatus, the external auditory meatus, the cochlea, the semi-circular canals, the canal for the internal carotid artery, and the foramina in the base of the skull.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 11th, Mr. H. A. G. Brooke, the President, being in the chair.—Dr. Joshua J. Cox showed a boy, aged nine years, a typical achondroplasic dwarf. The stunted and deformed condition of the long bones of the limbs, the "trident hands," and the narrowed pelvis were very evident. A series of skiagrams of the skeleton of this boy was exhibited together with skiagrams of the skeleton of a dwarfed child suffering from infantile myxœdema and of a normal child aged nine years.—Dr. Charles H. Melland and Dr. D. Ord gave a demonstration, illustrated by coloured micro-photographic lantern slides, of the Blood in Health and Disease. The former described the process of fixing and staining the films and explained that although a thorough knowledge of the blood could only be obtained by making a count of the corpuscles, red and white, and an estimation of the hæmoglobin, with a thorough inspection of a large area of blood film, it was still possible with care to select portions of the film which appeared, as it were, an epitome of the condition met with, as well as to pick out special fields which showed the presence of peculiar or unusual conditions of the corpuscles. Such a procedure had been followed in the present instance; the selected fields had then been photographed and the corpuscles coloured by hand, the colours of the stained films being reproduced as closely as possible, and in those cases in which there was any ambiguity in the uncoloured photograph the colouring was undertaken with the original microscopic field at hand for comparison and guidance.—Mr. E. Stanmore Bishop showed two Tubo-ovarian Cysts removed from a woman, aged 34 years, the mother of one child, 10 years old. The os had been split. There were no symptoms for four years and then there was flooding for seven weeks, which was followed by metrorrhagia more or less ever since. Physical signs pointed to fibromyoma. Both cysts were firmly adherent and had developed under pressure. After discussing the three modes of origin of tubo-ovarian cyst and Mr. J. Bland-Sutton's views on the production of hydrosalpinx Mr. Bishop mentioned a second case and showed the specimen, in which the same symptom of metrorrhagia had accompanied the development of a cyst under pressure of firm adhesions which had converted Douglas's pouch, in which it was found, into a closed cavity. Both patients recovered perfectly.—Dr. G. Robertson Mill showed a Preparation from a fatal case of Acute Obstruction. The terminal loop of the ileum was strangulated by an appendix which completely encircled it and the extremity of which was in turn imprisoned between the free border of the meso-appendix and the termination of the ileum.—Dr. J. S. Bury showed a specimen of Sarcoma of the Lung which caused a pulmonary systolic murmur.—Other preparations were exhibited as card specimens.

HARVEIAN SOCIETY OF LONDON.—A clinical meeting of this society was held on Feb. 19th, Dr. W. Winslow Hall, the President, being in the chair.—Mr. T. Crisp English showed a case of Paget's Disease of the Left

Nipple in a woman, aged 56 years. The patient was under the care of Mr. C. T. Dent at St. George's Hospital. The disease commenced 18 months ago as a red spot just above the nipple and now showed an oval red patch surrounding the nipple one and a half inches by one inch in diameter. The margin was well defined and the surface was covered with fine scales. There was distinct induration but there were no enlarged glands in the axilla.—Mr. E. W. Roughton said that Paget's disease was so frequently a precursor of carcinoma of the breast that he considered it the duty of the surgeon to remove the breast with a wide area of skin and to clear out the axillary contents.—Mr. F. Jaffrey and Mr. Campbell Williams both agreed with the diagnosis and recommended radical treatment.—Dr. E. Cautley showed a man, aged 23 years, with Pseudo-hypertrophic Paralysis. Apparently no symptoms were noted until seven years ago. He stumbled a little and had difficulty in getting upstairs. The calves measured 17½ inches in diameter and were very hard. The knee-jerks were absent. The vasti were a little wasted but no other muscles were involved. The case was interesting on account of the age of the patient, the limitation of the disease, and the comparatively slow progress.—Dr. James Taylor remarked that the case was very interesting as forming a link in a chain. He himself had known one case in which the signs and symptoms had only developed at the age of 18 years. Previously to this the patient had not only been able to walk but had actually been an athlete and had won prizes for running. Another case he had seen at the age of 43 years and the patient had never been able to run. He remained practically unchanged, a typical case of pseudo-hypertrophic paralysis, until his death from pneumonia at the age of 50 years. These cases seemed to illustrate a condition in which there was probably an inherited weakness or defect in the muscular tissue, which might become obvious at any age and progress with varying rapidity.—Mr. Roughton showed a youth with Dislocation of the Right Shoulder and Right Hip and with deformities of many bones, including the lower jaw. There were scars in the region of all the bones affected and the condition was probably due to chronic septic infection during infancy.—Mr. Jaffrey showed a specimen of a Testicle which before removal had been diagnosed by everyone who saw the patient as one of tuberculous epididymitis but which proved on removal to be rapidly growing sarcoma. A secondary deposit in the lumbar glands was recognised within a fortnight of removal of the organ.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A clinical evening of this society was held on Feb. 12th, Dr. G. R. Murray, the President, being in the chair.—The following were some of the cases exhibited:—Dr. H. E. Gamlen showed (1) cases of Lupus treated by x rays and ultra-violet rays, some of the patients being apparently cured and others improving; (2) Rodent Ulcer of the Face cured after 90 minutes' application of the x rays; and (3) Scirrhus of the Breast (?) cured by the x rays. He also showed a case of Epithelioma of the Tongue supervening on Gumma; this patient refused operative treatment. At first with x-ray treatment there was distinct improvement but now the disease was rapidly becoming worse.—The President showed cases of (1) Paralysis Agitans; (2) Aneurysm of the Aorta; and (3) Insular Sclerosis.—The President and Mr. J. R. Morison showed a case of Cirrhosis of the Liver treated by operation and cured.—Mr. A. M. Martin showed a case of Marked Varicose Condition of the Veins of the Left Leg in a man aged 60 years, with a small ulcer over the internal malleolus. The treatment proposed was excision of the internal saphena in the leg and ligature also at the saphenous opening.—Mr. G. W. Ridley showed (1) a patient after Removal of the Upper Jaw and part of the Nose for Malignant Disease; and (2) four patients after Excision of the Tonsil for Sarcoma.—Dr. J. Limont showed several examples of Skin Disease (lichen, erythema purpureum, pityriasis rubra, &c.).—Dr. T. Oliver showed a case of Aneurysm of the Arch of the Aorta treated by gelatin injection.—Dr. Oliver and Mr. Morison showed a woman, aged 41 years, whose Uterus, with the Infant, was removed by Abdominal Section, almost at term, for Carcinoma of the Cervix.—Dr. W. C. Beatley showed a case of Exophthalmic Goitre in a girl, aged ten years.—Dr. R. A. Bolam showed a patient with Natural Development of Collateral Venous Channels in Cirrhosis of the Liver.—Mr. T. G. Ouston and Dr. Young showed a patient after operation for Congenital Torticollis, together with apparatus for maintaining correction.—Mr. Morison showed cases of (1) old Tuberculosis of the Rib with affection of the overlying skin; (2) Irremoveable Carcinoma of the Breast treated by Oöphorectomy with improvement; (3) Paralysis of the Brachial Plexus following Dislocation of the Shoulder nine months previously; and (4) Extensive Epithelioma of the Chin with marked Gland Infection treated by ligature of both external carotids.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Feb. 6th, Dr. P. McBride, the President, being in the chair.—Mr. R. Lake showed (1) a Microscopic Specimen of Pseudo-pachydermia from the Processus Vocalis in a tuberculous subject; and (2) a case of Tuberculous Laryngitis.—Mr. Charters J. Symonds showed a case of Paralysis of the Left Vocal Cord, the result of lead poisoning in a girl, aged 18 years. The patient exhibited the usual paralysis of the limbs and a marked blue line on the gums. The rarity of the laryngeal affection was commented upon.—Sir Felix Semon drew attention to the fact that the form of paralysis varied with the poison, lead having a selective action on the abductors.—Dr. L. H. Pegler showed a Septotome for Moure's and other Operations for Deflected Septa.—Mr. P. R. W. de Santi showed a case of Unilateral Enlargement of the Right Side of the Thyroid Gland in a woman aged 50 years. There was great displacement of the larynx and trachea and the patient had had attacks of dyspnœa. Mr. de Santi proposed to remove the right half of the thyroid.—Sir Felix Semon showed a case of Tabes with early and unusual implications of various cerebral nerves in which the chief features of interest were (1) complete paralysis of the soft palate in spite of which the swallowing of fluids did not produce regurgitation when the patient drank slowly; (2) non-implication of the tongue until a few days previously; (3) the vacillations of the symptoms, the paralytic phenomena being distinctly more marked on some days than others; and (4) the absence of laryngeal crises.—Dr. J. Donelan showed a case of Ankylosis of the Left Crico-arytenoid Articulation in a woman, aged 23 years.—Dr. J. Dundas Grant showed a case of Persistent Œdema of the Larynx in a middle-aged woman. The case was discussed by Sir Felix Semon, Dr. F. de Havilland Hall, Dr. A. Brown Kelly, and Dr. Mackintosh.—Dr. W. Hill showed a case of Tuberculous Disease of the Larynx with intra-arytenoid growths, but with no evidence of pulmonary involvement.—Other specimens were shown by Mr. Hunter Tod, Mr. W. H. B. Stewart, Mr. F. J. Steward, Dr. Brown Kelly, Mr. E. B. Waggett, and Dr. E. Furniss Potter.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session of this society was held on Feb. 11th, Mr. G. Munro Smith being in the chair.—Dr. E. Markham Skerritt showed a case of Anomaly of Blood-vessels.—Dr. H. Waldo exhibited the following cases: (1) Two cases of Lupus Vulgaris treated by the Finsen light; (2) a case of Folliculitis; and (3) a case of Lupus Erythematosus.—Mr. A. W. Prichard showed a Simultaneous Amputation of both Breasts and Removal of Infected Glands in both Axillæ.—Dr. J. E. Shaw showed a case of Scleroderma with Pigmentation and Muscular Atrophy.—Mr. J. Paul Bush, C.M.G., exhibited the following cases: (1) A Sequestration Cyst of the Cheek; (2) Unilateral Coxa Vara; (3) a patient after Removal of the Clavicle for Sarcoma (the specimen was shown); and (4) a patient after Removal of the Scapula for Sarcoma (the specimen was shown in this case also).—Dr. J. Michell Clarke showed (1) a case of Graves's Disease, with Unilateral Exophthalmos and a Patch of Hyperidrosis on the Leg; (2) a case of Intracranial Tumour; (3) a case of Thoracic Aneurysm with Indirect Signs; and (4) a case illustrating the Treatment of Pancreatic Diabetes by Opium.—Mr. F. R. Cross showed (1) two cases of Operation for High Myopia; and (2) a case of Thiersch Grafting for Severe Burn of the Face involving both Eyelids.—Dr. A. Ogilvy exhibited a case of Ruptured Choroid showing the entrance of one of the ciliary arteries through the sclerotic.—Dr. C. H. Walker showed (1) a case of Cyst of the Iris; and (2) a case of Organised Lymph in the Anterior Chamber from a wound of the cornea nine years previously.—Dr. R. G. P. Lansdown showed (1) a case of Amputation of the Breast with Removal of a Rib; and (2) a case of Atrophic Scirrhus of the Breast with Secondary Deposits.—Dr. F. H. Edgeworth exhibited cases of (1) Chorea; (2) Acromegaly; and (3) Achondroplasia.—Mr. T. Carwardine showed a case of Perityphlitic Actinomycosis.—Mr. H. F. Mole showed (1) a case of Injury to the Testis; and (2) a case of

Duchenne's Birth Palsy.—The cases were discussed by the members present.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Feb. 6th, Mr. J. Lionel Stretton, the President, being in the chair.—The President showed a large Appendix Cæci removed from a man, aged 25 years, whose peritoneum was found to be infiltrated with miliary tubercle.—The President also showed two patients upon whom he had operated for Anthrax. One of them was a woman, aged 31 years, in whom the pustule appeared on the cheek on Dec. 9th and was excised on the 15th. The other patient was a man, aged 44 years, on whose neck the pustule appeared on Jan. 18th and was excised on the 24th. Both patients were treated with powdered ipecacuanha internally and externally and both made good recoveries. The President also mentioned the case of a man who died about two months previously in whom the pustule was not removed. He insisted on the importance of immediate excision and advocated the use of ipecacuanha internally and externally. Though he was not convinced as to its specific action he had so often seen cases recover under its use that he felt bound to use it until its value was disproved.—Mr. E. Stanley Robinson showed a man, aged 59 years, who was considered to be suffering from Thoracic Aneurysm.—Dr. W. L. Maccormac read notes of the case of a man, aged 55 years, who was admitted into hospital suffering from Dyspnœa after exertion and a harsh, "brassy" cough. The laryngoscope showed some thickening at the upper end of the larynx and the case was diagnosed as one of malignant disease of the larynx. Chloroform was being administered in order that tracheotomy might be performed for the relief of the dyspnœa when the patient died from asphyxia.—Dr. Bertram Addenbrooke read a paper on Medical Electro-therapeutics.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Feb. 20th, Dr. Thomas G. Stevens, the President, being in the chair.—Dr. B. G. Morison opened a discussion on Infantile Diarrhœa (Zymotic Enteritis). The cause of the condition he held to be the ingestion of organisms with food. The clinical features and pathology were similar to those of Asiatic dysentery. The green-coloured stools were due, he thought, to oxidation of a deficient quantity of bile in the intestine. This seemed to be confirmed by the altered colour of the stools through the stimulus of rhubarb or euonymin to the normal yellow. The essential item in treatment was to avoid fermentation of milk, and this was most simply done by abstinence from milk for 24 hours or more. Albumin-water, meat-juice, or whey might be given advantageously. Rest in bed was preferable to being nursed. The drugs most serviceable were salol as an antiseptic, bismuth and chalk as astringents, and ipecacuanha as a cholagogue.—The President said that he had seen very good results in these cases from giving small doses of the solution of perchloride of mercury and again from glycerine of carbolic acid.—Dr. S. P. Huggins said that he had found benefit from feeding on unsweetened condensed milk and giving sodium salicylate.—Dr. Morison replied.

HUNTERIAN SOCIETY.—A meeting of this society was held on Feb. 11th, Dr. A. L. Galabin, the President, being in the chair.—The annual oration was delivered by Mr. T. H. Openshaw, C.M.G. The subject chosen was "John Hunter; his Influence on Surgery, with some remarks on the Treatment of Appendicitis."—The following officers were elected:—President, Dr. S. H. Appleford; vice-presidents, Dr. W. A. Dingle, Mr. F. Wallace, Mr. J. Adams, and Mr. J. H. Targett; treasurer, Dr. R. Hingston Fox; trustees, Mr. F. M. Corner, J.P., Mr. F. Gordon Brown, and Mr. R. Clement Lucas; honorary librarian, Dr. T. H. Arnold Chaplin; orator, Dr. J. F. Woods; secretaries, Dr. T. Glover Lyon and Mr. H. L. Barnard; editorial secretary, Dr. E. W. Goodall; council, Dr. H. R. Andrews, Sir Hugh R. Beevor, Dr. A. T. Davies, Dr. R. Fortescue Fox, Mr. A. W. Galloway, Dr. Galabin, Mr. F. R. Humphreys, Dr. Ernst Michels, Dr. W. Rawes, Dr. J. W. Oliver, Dr. F. J. Smith, and Dr. Woods; auditors, Mr. F. Gordon Brown, Dr. Smith, Dr. Davies, and Dr. Woods.

VACCINATION IN BRISTOL.—During 1902 there were 6896 primary successful vaccinations performed in Bristol as compared with 5776 in 1901.

Reviews and Notices of Books.

The Diseases of Warm Countries: a Handbook for Medical Men. By Dr. B. SCHEUBE, State Physician and Sanitary Adviser, Greiz; late Professor at the Medical School in Kioto (Japan). Translated from the German by PAULINE FALCKE, with addenda on Yellow Fever by JAMES CANTLIE, M.B. Aberd., F.R.C.S. Eng.; and on Malaria by C. W. DANIELS, M.B. Cantab., M.R.C.S. Eng. Edited by JAMES CANTLIE, M.A., M.B. Aberd., F.R.C.S. Eng., D.P.H., Lecturer at the London School of Tropical Medicine; Surgeon to the Seamen's Hospital Society, Albert Dock Hospital; Lecturer on Applied Anatomy, Charing Cross Hospital Medical School, London; Consulting Surgeon to the Alice Memorial Hospital, Hong-Kong. With all the original Coloured Maps, Charts, Illustrations, &c., together with many additional Plates from the *Journal of Tropical Medicine*. Second revised edition. London: John Bale, Sons, and Danielsson, Limited. 1903. Pp. 594. Price 30*s.* net.

WE may say at once that this is a full and, so far as is possible considering the many fresh additions that are being constantly made to our knowledge, a very complete book. The editor is quite justified in calling attention in his preface to the range of knowledge, general accuracy, and scientific spirit which characterise Professor Scheube's work and to the care and labour involved in the production of a book of this kind. The desirability of reproducing it in English will be admitted by all who are interested in tropical diseases and in the progress of scientific medicine. The translation of Professor Scheube's work has been successfully carried out by Miss Pauline Falcke.

As affording a general idea of the nature and scope of this handbook of the diseases of warm countries we may say that the subjects embraced in it are arranged in six groups—general infectious diseases; diseases caused by intoxication; diseases due to animal parasites; organic diseases; cutaneous and local diseases; and the cosmopolitan diseases in the tropics, with an addendum to the chapter on yellow fever in which Mr. Cantlie, who edits the handbook, describes the results of the latest investigations of the United States Army Commission in Cuba, and another addendum to the chapter on malaria by Dr. Daniels. The method generally followed in dealing with the subjects under consideration is a systematic and good one. It consists of a definition of the disease, its synonyms, history and geographical distribution, etiology, symptomatology, varieties, pathological anatomy, diagnosis, prognosis and treatment, supplemented by a carefully compiled bibliographical list of the literature bearing upon the subject. It would be impossible, of course, within any reasonable limits to travel over the ground occupied by an exhaustive treatise of this kind. We must content ourselves by referring to a few of the chapters which we have read with most interest. The volume opens with a consideration of the general infectious diseases and begins with Plague. This chapter summarises the facts connected with that disease, together with the results which have accrued from recent experience and scientific investigations during the modern history of epidemic plague.

The chapter on Mediterranean Fever is a brief one, but it nevertheless gives an accurate description of what is known. The Malaria of Warm Countries is discussed in a long and carefully written chapter and with the excellent addendum by Dr. Daniels, medical superintendent of the London School of Tropical Medicine, may be profitably studied. The chapters on Beri-beri, Leprosy, and Filarial Disease are admirably illustrated; indeed, the illustrations throughout the volume are, generally speaking, very good. Many of them are from the *Journal of Tropical Medicine* or are new, as will be seen if the reader will turn to the

section on Yaws, Pellagra, Lathyrism, Tinea Imbricata, and Pinta. Those who have practised or travelled in the East cannot fail to be reminded of what they have occasionally seen there and will be best able, perhaps, to appreciate their fidelity to nature. It should be added that in addition to these illustrations the work contains some excellent maps and plates.

A Treatise on Surgical Therapeutics of Domestic Animals. By P. J. CADIOT, Professor, and J. ALMY, Adjunct, in the Veterinary School of Alfort. Translated by A. LIAUTARD, M.D., V.M. New York: William R. Jenkins. Vol. I., Part 3. Pp. 130.

THE names of the authors of this little volume are a sufficient guarantee of the value of the original work to the veterinary practitioner but the translation is somewhat disappointing to English readers. Most curious terms, unintelligible to English ears, are to be found in many places and many new words have been coined. For example, anthrax is divided into "bacterian" and "bacteridian," the term "bacterian anthrax" being applied to the disease known as "blackquarter," a malady which is now known by every veterinarian to be due to its own specific organism and not in any way to be connected with the bacillus anthracis. We read on pages 209 and 210 that farcy is "a morvo-farcinous infection and under all its forms susceptible of cure ....," and the word "malleinization" has been coined to express the use of the mallein test. Under Tuberculosis "a local relapse implies a new exeresis" and a "bacterioscopic" examination is said to establish the diagnosis of this disease with certainty. The following paragraph on page 212 is quite unintelligible to the average mind and reads like a word puzzle: "Fungous arthritis should be treated by immobilization of the joint and injections of iodoformed vaseline into the fistulaer those of chloride of zinc (1–10) into the zone neighbouring the morbid center (scleragenous method of Lannelongue)." We read (page 215) that "in man some observations have been mentioned which seem to establish the *contagiosity* of cancer," and as headings of chapters the diseases known as "Stickfasts," "Contractures," "Nerf-férure," and "Amyotrophies" certainly require explanation. Perhaps, however, the most curious and erroneous statement is to be found on page 240, the chapter being headed "Furuncle-Anthrax." The statement is made that "ordinary *anthrax* is but a voluminous, diffuse furuncle, extending to the subcutaneous connective tissue, or an inflammatory tumour formed by confluent furuncles. Like the generality of human surgeons and of foreign veterinarians, we have no hesitation, notwithstanding the etymology, to apply this word to lesions which have nothing in common with anthrax (charbon). Bacteriology has shown that furuncle and anthrax are promoted in man by the same micro-organism—the staphylococcus pyogenes aureus." We regret that neither the translator nor the publisher can be congratulated on the result of the good intentions, expressed in the preface, to benefit the "English-reading practitioners as well as the students of our veterinary colleges."

Elementary Biology, Descriptive and Experimental. By JOHN THORNTON, M.A. London: Longmans, Green, and Co. 1902. Pp. 270. Price 3*s.* 6*d.*

THE volume before us forms a recent addition to the well-known Practical Elementary Science Series published by Messrs. Longmans, Green, and Co., and is intended "mainly for teachers who are preparing for the examinations of the Board of Education." The author in his preface exoresses the hope that "besides being serviceable to students preparing for the examinations mentioned ..... the book will prove useful to all teachers engaged in promoting nature study." The work may be roughly divided into three parts dealing respectively with (1) the problems common to both plants and animals; (2) botany; and (3) animal biology. Of these the botanical portion is the least satisfactory.

In a biological work which is to serve as an introduction to a knowledge of the two constituent sciences, it is a mistake, we think, to enter at all deeply into a consideration of the structure of plants—that is to say, histological details which can only be made out with the aid of a compound microscope. By all means let the structure of plants be dealt with, but only so far as can be ascertained by the use of a good lens. It is a matter for regret that there is too great a tendency to neglect morphological botany, notwithstanding the fact that it may be made one of the most interesting and educative of sciences for beginners. It is not by any means suggested that Mr. Thornton is responsible for this, for inasmuch as he has set himself the task of writing a book suitable for a certain examination he must perforce follow the prescribed work. The matter is rather to be referred to those to whom the syllabus is due. On the other hand, the author is responsible for his statements of facts; these are generally both clear and correct, but this is not invariably the case. For instance, in paragraph 13 the following observations concerning cellulose occur: "It forms the fibrous framework of all plants, as well as the envelope round starch grains. Cotton, wool, flax, and hemp consist of cellulose mixed with small quantities of mineral matter, while woody fibre is modified cellulose with colouring and mineral matter." Further, several statements regarding fibres need much improvement; for example, on p. 57 we find that the bast fibres (presumably of the sunflower) are described as having cellulose walls; again, on the following page the conduction of water is ascribed to the wood fibres; and, further, on p. 133 the following occurs: "The small black seeds of the cotton plant are also provided with fine white hairs or fibres for dispersal. These fibres provide the cotton of commerce." Besides structure, the botanical portion of the book deals also with the morphology and physiology of plants.

That part of the work which is devoted to animal biology is chiefly concerned with the outlines of the structure and physiology of the human body. The cat is taken as an example to illustrate "structure in relation to movement as represented by some common quadruped." Experiments are interspersed throughout the text and very generally are suitable; it may be pointed out, however, that the following experiment as it stands (p. 90) is not conclusive: "Collect water passed through some soil in a flower-pot. Filter it to remove suspended matter and then evaporate the clear solution in an evaporating dish. A residue is left, showing that soluble matter was taken up from the soil by the water that has passed through it." The work is illustrated by 180 figures, some of which have been specially drawn, while several have been obtained from various sources. Many questions and exercises, with occasional hints and explanations, form a sort of appendix. In conclusion, we are of opinion that, with the exception of those points of weakness to which attention has been drawn, the work will prove useful to those for whom it is intended.

LIBRARY TABLE.

Memoirs and Letters of Sir James Paget. Edited by STEPHEN PAGET, one of his sons. Third Edition (eighth impression). With a Postscript by Sir THOMAS SMITH. London: Longmans, Green, and Co. 1903. Pp. 465. Price 6*s.* net.—This the third and cheaper edition of a remarkably interesting work, of which we reviewed the first edition in THE LANCET of Oct. 12th, 1901, p. 982, has the advantage of a postscript by Sir Thomas Smith who, as he himself says,

had been intimately associated with Paget for 50 years. Sir Thomas Smith seems to have been most impressed by Paget's enormous capacity for work. "It was with him a recreation, or rather a passion." "In his own work Paget certainly showed a complete disregard of his health and personal comfort." When quite an old man, however, he seems to have realised that a man can overwork, for he said to the writer of the postscript, "I have worked too hard, Tom." The increasing infirmities of age are irksome to everyone and must have been doubly so to one so active as Paget, but these memoirs and letters so carefully and lovingly edited by "one of his sons" show, again to quote Sir Thomas Smith, "how contentedly he acquiesced in the necessary restrictions of increasing infirmity and with what cheerful submission he resigned his life."

A Concise History of the North Staffordshire Infirmary and Eye Hospital. By RALPH HORDLEY. Newcastle-under-Lyme: G. T. Bagguley. 1902. Pp. 71. Price 5*s.* net.—In 1902 occurred the centenary of the foundation of the North Staffordshire Infirmary and the year was further marked by the laying of the foundation-stone of the new nurses' home, a building erected in memory of the King's Coronation. In honour of these two events Mr. Hordley, who was formerly secretary and house steward, compiled this concise history. The institution started as the Dispensary and House of Recovery in Etruria Vale and was erected on a plot of land purchased from Josiah Wedgwood in 1802. Here it remained until 1815, when it was moved to Etruria and was called the North Staffordshire Infirmary. In 1869 another move was made to Hartshill when it was called by the additional title of Eye Hospital. Mr. Hordley's researches into the archives of the institution show the steady progress made in the buildings and in the methods of treatment in vogue. We may add that the last addition—namely, the nurses' home—has cost £10,000.

Bacteria in Daily Life. By Mrs. PERCY FRANKLAND. London: Longmans, Green, and Co. 1903. Pp. 216. Price 5*s.* net.—This is a popularly written but none the less accurate account of the influence of bacteria in everyday matters. Much of the text, we learn from the preface, has already appeared in various periodicals, but a great deal of the book is worth spreading broadcast, not only from a medical point of view but also from those of social and political economy. Thus the chapters on What we Breathe and on Sunshine and Life may well induce county councils and other authorities to do everything in their power to inhibit overcrowding and the smoke nuisance, while the chapter on Milk Dangers and Remedies shows very clearly how the prevailing agricultural depression might be largely lessened if our farmers and landowners would only follow the example of Denmark and see about organising dairy produce in a scientific and cleanly manner. In the year 1898 this country imported in round numbers 360,000,000 pounds of butter, and of this quantity Denmark alone sent to us over 160,000,000 pounds. The last chapter of the book, entitled "Some Poisons and their Prevention," deals with the question of antitoxins and immunity, and though wisely not going deeply into the very difficult subject of immunity, Mrs. Frankland has collected a number of facts from the work of investigators which will give the ordinarily intelligent reader a good idea of the work accomplished in this field of science up to the present time.

The People of Lewis. Report to the Secretary for Scotland by the Crofters' Commission on the Social Condition of the people of Lewis in 1901 as compared with 20 years ago. London: Eyre and Spottiswoode. 1902. Pp. 65—civ. Price 1*s.* 5*d.*—An interesting Blue-book has recently been published on the social condition of the people of Lewis, a large island in the Outer Hebrides. The information contained in the volume is by no means confined to the strict letter of the title, for a good deal is to be found concerning the past history of the islanders. The report was drawn up to give an idea as to the best method of treating the problems conveniently summed up in the expression "the crofter question." The conditions of life which existed in Lewis some years ago were of the most insanitary nature as judged by modern standards; animals and men dwelt not only under the same roof but in the same room and the droppings of the cattle were removed but once a year when the land was tilled in the spring. A form of disease called "dung fever" was usually prevalent at that time of year and not infrequently proved fatal. Another disorder which was not uncommon in old days was one which afflicted young children about the fifth day after their birth. The disorder was investigated some years ago by Dr. C. M. Macrae ("On Tetanus Nascentium.") Notwithstanding these and other drawbacks the birth-rate is very high and the population is increasing rapidly. For a long time this has been a cause of uneasiness to the lords of the soil, one of whom, in the early part of last century, "used every means in his power to keep the population down." This singular statement occurs in the evidence given at an inquiry held in 1827. The land available for crofters has been insufficient for their wants, and in course of time it has happened that those who have had holdings have allowed their families to share their rights with them and new buildings have been put up for the accommodation of the younger people, the amount of land under tillage not being increased. One of the problems on which the Commission has had to report is what in these circumstances should be done. Another point which the Commission investigated had reference to an alleged increase in lunacy amongst the islanders. The result of this inquiry seems to make it clear that the chief change has taken place in regard not to the numbers but to the treatment of lunatics. Formerly they were not interfered with and lived as they chose; at the present time they soon come under observation and are removed to the asylums provided for them. The people of Lewis are a very fine, a most prolific, and a most industrious race. The men take more than their share in national defence. In the Royal Naval Reserve alone the Lewis islanders had over 2000 men in training during last year. The home industries of Lewis are few, but a considerable amount of cloth is still made as well as a little pottery. The pots, which are only manufactured at one place, are rude and primitive in appearance and are little used for home purposes, but it is pleasing to know that considerable quantities of them are sold in the course of a season to the "curio-hunters" for whom they are designed.

The Truth and Error of Christian Science. By M. CARTA STURGE (Moral Science Tripos, Cambridge), with introduction by Rev. H. S. HOLLAND, Canon of St. Paul's. London: John Murray. 1903. Pp. 160. Price 6*s.*—Miss Sturge has so thoroughly exposed the true nature of that conglomeration of mistake, conviction, and blind assertion which goes by the name of Christian Science that her work is perfectly intolerable. To say this is to pay her the truest compliment. No sane mind can tolerate page after page of such mistaken logic and such crooked conviction as are revealed in the works of the "founder" of Christian Science; and in the same way Miss Sturge has so conscientiously expounded and demonstrated this new doctrine that her work, through its very excellence, produces a degree of mental irritation that makes the complete perusal a sheer impossibility. Miss Sturge deserves great credit for the sober and quiet way in which she has sought to understand the sensational statements, the unwarranted conclusions, and the untrustworthy premisses of Mrs. Eddy, and still more for the judicious and impartial manner in which she, so to speak, shows up Christian Science as a mistaken philosophy, if philosophy it can be called at

all. The medical reader, too, will find little that is faulty or deficient in Miss Sturge's account and explanation of the "healing" side of Christian Science. What Mark Twain's admirable and irresistible articles in the *North American Review* do for the average man and woman of the world in the way of showing the real nature of Christian Science, its grossly material side and its commingled spiritual excellences, that Miss Sturge's book will do for the thoughtful reader and the student of religion, if only such persons can endure the ordeal of reading a just account of Christian Science.

New Inventions.

IMPROVEMENTS IN VAGINAL TUBES.

IN THE LANCET of Dec. 4th, 1897, p. 1463, I described a new form of vaginal tube the chief characteristics of which were a bulbous end and a comparatively thin rigid shaft. This scientifically adjusted and practicable instrument offered the one disadvantage of the bulb being hollow. It has hitherto been considered by gynæcologists and obstetricians that all vaginal tubes must of necessity have a number of perforations terminating into the central canal. The common red gum-elastic tubes, used hygienically by women, as well as all glass tubes used by surgeons, have been made in this way. A tube with several very small perforations, however, cannot easily be kept clean. I have found that, provided a tube be bulbous, as seen in Fig. 1, only one bore is necessary, running from end to end, particularly if this bore enlarges at its extreme end, as seen in Fig. 2 (section); the bulb dilates every part of the vagina and its

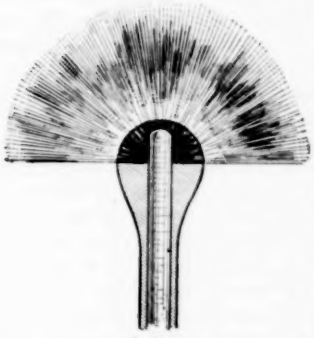
FIG. 1.

FIG. 2.

Section.

FIG. 3.

FIG. 4.



Section.

fornices, according as it is manipulated and levered, while the fluid distributes itself just as widely, practically, as it would when passing through a number of perforations. This simply-constructed bulbous tube in glass or vulcanite is thus the easiest possible to keep clean; it may be antisepticised more readily and perfectly than any other vaginal tube in existence. In the case of glass the bulb is not solid between the bore and the circumference, but hollow, as seen in Fig. 2 (section), and there is no communication between the bore and the cavity of the bulb. Experiment shows that a tube having a solid-walled bulb could not be made in either glass or earthenware, and if it could be made it would not lend itself for fine manipulation as does a hollow lighter one. The glass bulb illustrated also floats in fluid and may be dropped into a vessel containing fluid without breaking.

Another vulcanite form of tube, Fig. 3 and Fig. 4 (section), has its single bore met near the end by a very narrow bisecting slot, which not only spreads the fluid, as seen in Fig. 4, but prevents the tube from being blocked by clot or other material returning in a back flow, as the perforations of tubes commonly used frequently are. This form of tube may be preferred by those who use a Higginson's syringe. The small end of each tube is made to fit any ordinary indiarubber douche or syringe tubing.

The glass tubes are made in one design, as illustrated in Fig. 2, and with one size of bulb only, namely one and a quarter inches in diameter. In vulcanite the bulbs are of two sizes, one and three-eighths and one and one-eighth inches respectively in diameter, and have two distinct designs, the one having a single bore and the other a single bore met by a slot. They are supplied by W. H. Bailey and Son, 38, Oxford-street, London, W.

Surbiton. HAYDN BROWN.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Feb. 19th, Sir WILLIAM SELBY CHURCH, Bart., K.C.B., the President, being in the chair. The meeting had been adjourned from Jan. 29th.

A report was received from the Laboratories Committee, dated Dec 5th, 1902. On the motion of the Senior Censor (Sir R. DOUGLAS POWELL), seconded by the Second Censor (Dr. G. VIVIAN POORE) the report was received and adopted.

The Harveian librarian (Dr. J. F. Payne) presented a list of books and other publications which had been given to the library during the past quarter and the thanks of the College were ordered to be given to the donors.

The annual return by the examiners of the results of the examination for the Licence in the year 1902 was received and ordered to be entered on the minutes.

The PRESIDENT then dissolved the Comitia.

ANNUAL DINNER OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The members and friends of the West London Medico-Chirurgical Society held the twenty-first annual dinner of the society at the Trocadéro Restaurant, London, on Feb. 19th, under the chairmanship of the President of the society, Mr. Rickard W. Lloyd. The first toast after the customary loyal toasts was "The Imperial Forces," proposed by Mr. T. R. Atkinson who in the course of his remarks on the medical department of the army pointed out that the institution of the Medical Staff College in the metropolis was a great sign of the times. Sir William Taylor, K.C.B. (Director-General of the Army Medical Service), in reply, referred to the services rendered by the West London Medico-Chirurgical Society and similar associations in the cause of the wives and children of those who were obliged to go on active service. He looked forward to the time when the civil members of the medical profession would know more of the medical department of the army and he trusted that the establishment of the Medical Staff College in London would prove that its members were not unworthy of the consideration of their brethren. The toast of the "West London Medico-Chirurgical Society" was given by Mr. F. Swinford Edwards and acknowledged by the President. Mr. C. R. B. Keetley followed with a witty speech in which he proposed "The Kindred Societies." Mr. Howard Marsh, who replied in his official capacity as the President of the Clinical Society of London, received hearty applause for a spirited and humorous answer to Mr. Keetley's good-natured raillery. Dr. Seymour Taylor proposed "The Guests," for whom Dr. J. F. W. Silk answered. After Mr. Lloyd had acknowledged the toast of "The President," proposed by Dr. F. F. Schacht, the officers of the society, Mr. T. Gunton Alderton (treasurer), Dr. E. A. Saunders (senior secretary), Mr. H. P. Dunn (editor of the society's journal), and Mr. W. McAdam Eccles (editorial secretary), duly acknowledged the compliment paid to them by Mr. Alban H. G. Doran.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 28, 1903.

Moorland Waters and Lead Poisoning.

A REPORT has just been issued by the Medical Department of the Local Government Board which gives details of a prolonged research undertaken by Dr. A. C. HOUSTON on the power which certain moorland waters possess of dissolving lead. The object of the research was to determine the causes of the acquisition by water of this "plumbo-solvent" ability and to ascertain the extent to which the large moorland gathering grounds of Lancashire and Yorkshire are liable to furnish water capable of exercising the objectionable property of acting upon domestic lead service pipes. So far as the cause of the phenomenon is concerned, Dr. HOUSTON'S completed records point to conclusions which are substantially the same as those which the present medical officer of the Local Government Board, Mr. W. H. POWER, C.B., drew tentatively in 1895 as a result of his own earlier inquiries into lead poisoning in Sheffield and of study of the data subsequently obtained in his department.

Briefly stated, a water which is capable of dissolving lead is acid and its acidity is ultimately to be referred to drainage from peaty soil. The formation of acid takes place within the peat itself and results from the action of specific bacteria, which, when isolated, possess the power of rendering by their growth a sterile neutral decoction made solely from peat both acid and possessed of "plumbo-solvency." The degree of acidity of a given supply is determined by the presence of peat on the gathering area and by the conditions under which the drainage of the peat gains access to the supply. The degree of its "plumbo-solvent" ability, broadly speaking, corresponds to the degree of its acidity, although the ratio is not necessarily quite the same for all peaty waters. The natural conditions which favour the access of peaty water to a supply are, of course, numerous and varied. The most dangerous period is commonly when a sharp storm succeeds a long period of drought, the "first washings" of peat in these circumstances being particularly acid. Hence, as Dr. HOUSTON shows, there is much advantage in placing "leaping weirs" across the tributary streams concerned, arrangements designed to exclude these first washings automatically from the supply. Whether the water derived from peat which ultimately reaches the waterworks reservoir is acid or not depends to some extent upon the distance traversed and upon the character of the bed of the stream, but is mainly determined by the extent to which it becomes mixed with spring water, which (at any rate in the Lancashire and Yorkshire districts) seems habitually to possess acid-neutralising properties. Out of 58 reservoirs served by the gathering grounds of 23 waterworks visited by Dr. HOUSTON no less than 35 contained acid water able to dissolve lead. Among these are reservoirs of such important municipal supplies as Bradford, Halifax, Keighley, and Oldham. In most instances the source of acidity could be traced to particular peaty streams and their small tributaries. The occasional ingress of large volumes of acid water in times of storm by way of these feeding streams, and in part the fact that the bed of the reservoir is frequently itself peaty, account for the circumstance that the water of storage reservoirs was in some instances found to possess an almost constant degree of acidity year after year.

Fortunately acid water from such reservoirs is seldom supplied directly to the consumer. Most large waterworks in Lancashire and Yorkshire have service reservoirs which receive their water from more than one source of storage, and Dr. HOUSTON gives many instances where, under normal conditions, admixture with a large volume of neutral water in itself suffices to render the mixed water harmless as regards lead. Moreover, the ordinary process of sand filtration exercises a considerable effect in counteracting acidity. In several instances it is customary to add lime or whiting at the waterworks as a matter of routine, and this, when properly done, prevents the water fron acting on lead. The practical question, however, is whether the precautions taken are uniformly efficient. Wholesale poisoning such as occurred in Sheffield in 1886 and in Mossley in 1893 is comparatively rare. But there have been several recent occasions in other Yorkshire and Lancashire towns where prevalence of lead poisoning has occurred to a minor extent. And, as Mr. POWER points out in his introduction to Dr. HOUSTON'S report, "it is important to remember that if owing to temporary omission of precaution a water-supply becomes possessed of plumbo-solvent properties for only a brief period, or if again a water habitually exercises only a slight solvent action on lead, it is likely that the number of cases of lead poisoning occurring at a given time will be small and that few will come under the notice of any one medical observer. It is easy to understand that in such instances mischief may be caused unknown to the responsible authorities, or that even if mischief is suspected, the matter may receive insufficient attention through failure to realise that in such circumstances the evidence that the poisoning is attributable to the water must of necessity be incomplete." The warning here given will be indorsed by medical officers of health who have had occasion to be suspicious of the occurrence in their districts of lead-poisoning due to water, and it should not be forgotten by waterworks engineers. It is unfortunately too common for the "waterworks department" of a large municipality to discourage advice from experts of other departments and the danger of this policy is obvious where any question of lead poisoning is likely to arise. All assistance which medical officers of health can give should be welcomed and the borough analyst, as the official chemist, should be used, not merely, as at present, to give an occasional assurance that a particular sample of tap water contains no lead, but also to examine systematically and frequently representative samples taken at different points in the distributing area and from the reservoirs and filters. In other words, every authority supplying moorland water should know precisely where the risks of the

introduction of acid water arise, and the efficiency of the method of meeting these risks should be constantly checked and wherever possible improved upon. When the matter is dealt with on proper lines there is, in Mr. POWER'S words, "no difficulty whatever in safeguarding a population supplied wholly or partly from moorland sources from risk of receiving water capable of dissolving lead." A detailed account of the nature of the precautions which should be taken will be found in Dr. HOUSTON'S report, and his description of the tests for acidity and "plumbo-solvent" ability, which he has adopted after a long series of comparative experiments, should be particularly useful to those concerned. We are glad to notice that Mr. POWER speaks apologetically of the use of the term "plumbo-solvent." It does no credit to the English language and we think if a new term was necessary some more euphonious and accurate word might have been coined.

Adenoma of the Rectum.

THE Erasmus Wilson lectures at the Royal College of Surgeons of England were delivered this year by Sir CHARLES B. BALL, Regius Professor of Surgery in the University of Dublin. He took as his subject adenoma and adeno-carcinoma of the rectum. The choice was a very happy one as it is a subject which has hardly been studied with the attention which it deserves. We are quite ignorant of the etiology of adenoma of the rectum and we have not yet determined the relation between the simple benign adenoma and the adeno-carcinoma of the rectum which is the commonest malignant growth of this portion of the alimentary canal. The lectures were very copiously illustrated by lantern slides which showed clearly the macroscopic and microscopic characters of the growths. From a very early period in the history of medicine the diseases of the rectum attracted much attention on the part of physicians, for the rectum is the only portion of the bowel which can be examined during life without cœliotomy, and therefore, at a time when necropsies were hardly ever performed, the rectum was the only portion the diseases of which were the subjects of accurate knowledge. It is, therefore, with interest that we turn to the fathers of medicine to see if they have written anything about so striking a condition as adenoma of the rectum. We find that among the works which are attributable to HIPPOCRATES or are the products of his immediate successors is a small treatise on hæmorrhoids. This contains a reference to a condition called the "bleeding condyloma of the rectum." It is not improbable that this term includes other forms of growth, such as venereal warts, but it can hardly be doubted from the description and the treatment that it was applied especially to the sessile or pedunculated adenoma of the rectum. CELSUS also gives a similar account and all subsequent writers on surgery up to modern times have treated of this pathological condition.

Sir CHARLES BALL pointed out that it is very difficult to draw any sharp line between the benign adenoma and the malignant adeno-carcinoma and said that the only test which our present knowledge affords us is the relation of the epithelial proliferation to the basement membrane. So long as this proliferation is simply a superficial development, even though it may produce a definite tumour projecting into the lumen of the bowel, we may look upon it as benign, but if, on the other hand, the proliferating epithelium pierces the basement membrane and invades the submucous layer and the muscular coat, or involves the tissues external to the bowel wall, then we are compelled to regard the growth as malignant, for it manifests all the clinical characters of malignancy. In some cases on digital examination the diagnosis between these forms of growth can be made with confidence, the superficial character, the softness, and the mobility of the simple adenoma being obvious, while in the case of the malignant growth its hardness and fixation proclaim at once its malignancy. In other instances, however, the assistance of the microscope has to be invoked before any certain diagnosis can be made. Hæmorrhoids are confined to the rectum; but these adenomata, both the simple and the malignant forms, are found throughout the entire length of the intestinal tract, though they are much more frequently met with in the rectum. The lecturer was inclined to attribute to local irritation the origin of some of the simple adenomata; for he pointed out that in cases of prolapsus recti in young children it is not rare to find small sessile adenomata on the exposed mucous membrane—too small, indeed, to have assisted in the production of the prolapse, but possibly produced by friction against the child's clothes. Upon the exposed mucous membrane of a colostomy, also, similar growths may be seen to appear. Sir CHARLES BALL objects on etymological grounds to the use of the word "polypus" for the pedunculated variety of the adenoma and, indeed, its use cannot be defended. The treatment of the benign adenoma is simple; for the more pedunculated forms ligature with removal by scissors is all that is required, while the more sessile varieties may be excised. Sir CHARLES BALL in his second lecture dealt with the "adeno-carcinoma," and showed that there are two distinct clinical types; one commences as a flat nodule in the mucous and submucous tissues, spreading somewhat rapidly and occurring more commonly in comparatively young subjects; the other is more superficial at first, does not grow so rapidly and contains more fibrous tissue, by the contraction of which stenosis of the bowel may be produced leading to intestinal obstruction. The histology and the symptoms were detailed, and much emphasis was laid on the urgent necessity for the early local examination of all cases of chronic diarrhœa, seeing that on an early diagnosis depends the hope of satisfactory treatment of the disease. For when the lymphatic glands are involved and the malignant growth has extended beyond the bowel wall there is but little reasonable expectation of extirpating the tumour.

The lectures were excellent and were founded on a vast clinical experience and will doubtless appear in book form, when we hope that a few points which demand further investigation will receive the author's consideration. Sir CHARLES BALL agrees with most histologists in looking on these simple rectal growths as true adenomata and the question arises, are they really adenomata? He has pointed out himself in his first lecture the very close analogy which exists between these "adenomata" of the intestinal mucous membrane and cutaneous warts. Now the chief reason for considering these adenomata to be glandular in structure is that on

microscopic examination tubular cavities can be seen lined by a modified columnar epithelium, resembling somewhat the Lieberkühn follicles of the bowel. In a section of an ordinary papilloma of the skin an exactly similar structure is visible. The digitate processes of the wart give rise to cleft-like spaces between them lined by the epithelium of the part, and therefore we would suggest that the so-called adenoma of the rectum is simply a papilloma growing from the rectal mucous membrane and that the so-called glandular spaces are merely the fissures between the papillary processes. In the more marked "villous" adenomata this structure is obvious and it is extremely probable that in the conglomerate forms the same structure obtains. The rectal adenomata also resemble the cutaneous papillomata in the frequency of their occurrence in the young, and in both forms the removal of a single growth may be followed by the appearance of a large number of similar tumours. This is not rarely observed with warts and a few cases have been recorded in which a similar result occurred on the removal of a single rectal adenoma. Mr. THOMAS BRYANT published in THE LANCET in 1898[1] a very striking case in which after the removal of one "polypus" the rectal mucous membrane ultimately became almost covered with sessile outgrowths. There is yet another similarity between rectal adenomata and cutaneous warts. They are both very liable after existing for years without apparent change to spread into the deeper tissues and to become carcinomatous. We suggest that the "adenoma" of the rectum may be truly a "papilloma."

The Choice of Books.

THE selection of a text-book by the student of medicine is often extremely difficult, yet on a judicious choice of works for his reading depends much of his success at examinations. That this difficulty in choosing is felt by many is clearly manifested by the frequency with which we are asked to advise on a course of reading for some examination. We always answer these correspondents to the best of our knowledge, but we often find it impossible to name an individual book which will fulfil exactly the requirements. In the Students' Number of THE LANCET we give every year lists of those works which we consider to be on the whole the most suitable for students. It must, however, be acknowledged that whatever care be devoted to the making of such a selection the result will not be always perfectly satisfactory in the case of every student. There is no work on any subject which is suitable for all candidates and for all examinations. Even when there are two books of equal standing it may be almost impossible to say which is the more suitable of the two. To take an instance: a few years ago the two chief text-books on physiology in the English language were FOSTER'S Physiology and LANDOIS'S work as translated and edited by STIRLING. No one conversant with the subject would deny that each of these treatises was a work of the highest class and that either could be studied with great benefit by a candidate for any of the higher examinations in physiology; yet it would be difficult to imagine two books more different in style and structure. The treatise of LANDOIS and STIRLING is a vast storehouse of facts in which the reader finds all the information which he could possibly require in an examination, but the very presence of so many data is in itself liable to confuse the mind. In FOSTER'S Physiology, on the other hand, a wide view is taken of the whole subject and the trend of research is clearly shown, but there is a total disregard of the individual unconnected fact, which is sometimes trying to a student searching for specific information. We have chosen this example to show that in many cases no single text-book, however perfect it may be, is necessarily sufficient for a particular examination.

The proper foundation for a student's knowledge should be laid in his lectures and his practical work. In some cases the lectures may entirely obviate the necessity for any text-book and we have known a candidate to obtain the gold medal in medicine at the M.B. examination of the University of London who had never read any work on medicine other than the notes of his lectures. Of course, this was an exceptional case, but as a student has to be "signed up" for attendance at lectures he should derive as much benefit as possible from them. To the practical work especially should he pay attention, for the knowledge learnt by practice is much more easily retained than is that learnt only from a book. Still, in nearly all cases a treatise on the subject in which the candidate is to be examined needs to be read. In the first place examinations differ greatly among themselves. Even when two examinations are of about the same degree of difficulty it does not necessarily follow that the same text-book will suit both. The experienced teacher will know and recognise how true this is. Candidates, moreover, vary greatly, not merely in mental capacity but also in the build of mind, so that for no definite reason a work that is easily read by one student is wearisome and distasteful to another. The mode of presentation of the facts and theories of a subject may be to the liking of one candidate, while to another it may prove utterly unsympathetic. There is also such a condition as mental dyspepsia. In the case of food, it is not merely necessary that an article of diet should contain a large amount of proteid or fat to render it suitable as food but that it should also be readily digested and absorbed; so is it with mental diet. If the information in a work is so concentrated that it cannot be digested and absorbed into the mind of the reader it cannot nourish him mentally but will serve only to irritate.

We have said that examinations and candidates differ; examiners differ also. Some men are born examiners; they can ascertain both in *viva voce* and in written examinations exactly what the candidate knows; they are reasonable in their requirements and considerate in their manner and the result of the examination may be trusted as correct. Others, with the best intentions in the world, never make good examiners. The questions which they set are obscure in meaning and the candidate in addition to his ordinary anxiety about the examination fears that he has misinterpreted the question; or the student is expected to know some rare fact of which probably he has never heard. Some examiners put questions which can be answered word for word from a text-book, others ask for information which may require extensive synthetic mental processes

[1] THE LANCET, April 2nd, 1898, p. 924.

There is yet another uncertain element in an examination and that is luck. Of course, in a theoretically perfect examination luck should have no place, but practically it often influences the result. A question may be put which bears on a case recently seen or a chapter recently read and so success may follow, while if a similar question on another part of the subject had been given failure would have resulted. Yet the fact remains that a well read man who knows his practical work ought to be able to pass the examination even though he may not have found in his books the answers to all the questions exactly in the words in which he must express them. There is one danger in reading which needs to be guarded against and that is the tendency to dip into too many books. One work mastered is of far greater value than two half learned. Let the student, therefore, choose his text-book with care and then proceed to master it. When that book is finished he may, if time permit, peruse another and he will derive benefit from seeing the same facts presented in a different way.

The Sale of Poisons.

THE report of the Departmental Committee appointed by the Lord President of the Council "to consider Schedule A to the Pharmacy Act, 1868, and to report the alterations therein which it deemed expedient and whether a third part should be added thereto," was issued last week. For some time past the rumour had gained currency that the committee had decided upon the adoption of a third part in the schedule which would concede some relaxation in regard to the sale of poisonous materials for agricultural and horticultural purposes. As a matter of fact, the committee has decided that such a part might be added without undue risk to human life. On the face of it this recommendation is of course directly opposed to the vital principle of the Pharmacy Act which practically placed the sale of poisons exclusively in the hands of qualified persons—that is to say, pharmacists who have been duly registered in accordance with the provisions of the Act. The vendor of preparations for use in connexion with agriculture, horticulture, or sanitation is not, according to the recommendations of the committee, to be a qualified man but only a licensee, the sale of such preparations being subject to regulations to be laid down by the Privy Council.

There can be no doubt that some inconvenience has been experienced by the agricultural and horticultural industries in obtaining what are powerful aids to those businesses—namely, arsenical sheep dips and weed destroyers. As a matter of fact, large quantities of these preparations have been sold illegally and in contravention of the requirements of the Pharmacy Act, so that the Pharmaceutical Society has not been able to exercise fully the powers conferred upon it with a view to restrict the sale of poisons to registered persons. Now and then, however, action has been taken and convictions have been obtained. We have recorded in the columns of THE LANCET instances in which the proceedings were based upon the sale by seedsmen or florists of a weed-killer containing arsenic. Since these convictions were obtained some uneasiness has been felt amongst the retailers of this class of poisonous preparation, many of them hesitating to continue the sale for fear of the law being carried into effect in their cases also. So far the Pharmaceutical Society had scored some sort of a triumph and it cannot be said that it was exceeding its duties in this matter in the least degree or was pursuing a vexatious line of action. It possessed full powers under the Pharmacy Act to restrict the sale of poisons even for the specific purpose indicated. The success of these actions, however, was the beginning of a strong movement amongst the agricultural and horticultural interests to secure the removal of the restrictions under which they laboured, with the result that a departmental committee was appointed and its conclusion now is that certain concessions should be made. It is of opinion that preparations for use in connexion with agriculture, horticulture, or sanitation (including arsenic, the alkaloids of tobacco, and carbolic acid) might be placed in a third part of the schedule, and that they should be sold only by licensed persons and be subject to regulations to be made by the Privy Council.

Although it seems to us that this recommendation suggests a somewhat hazardous experiment, it must be admitted that the arguments in favour of such recommendations being adopted are not without force. It should be remembered that the Pharmacy Act was drawn up in 1868, at a time, that is, when there could not have been the slightest idea that this Act would ultimately apply to industries dependent upon the use of poisonous materials. No one can contend for a moment that the sale of a weed-killer or insecticide requires the supervision of a particularly well-educated or qualified person such as is the registered pharmacist. But it is to be hoped that in the event of the committee's recommendations being adopted at least an intelligent person will be chosen. The Pharmacy Act in reality appointed the registered pharmacist to be the qualified vendor of poisons intended for medical application, because obviously only a responsible person with an accurate knowledge of poisons should be trusted to sell or to dispense preparations containing them. The employment of poisons for agricultural purposes cannot be said to relate in any way to the business of a pharmacy. Whilst, however, we are inclined to agree with the committee that the industries of agriculture and horticulture cannot be conducted effectively on modern principles without the extensive use of poisonous materials we are by no means certain that the relaxations suggested can be conceded without, as the committee puts it, undue risk to human life. At the same time, we are not sure that, if every hamlet and village could have its qualified pharmacist who would be authorised to sell poisonous materials, the public interest would be more effectually safeguarded. The risk, it seems to us, begins after the sale is effected and when the article is in the hands of the purchaser. The committee practically adopts the view that if the number of registered pharmacists were increased—that is, if every little place in the United Kingdom could have its pharmacy—there would be no necessity to extend the sale of poisons to licensed persons or to persons who are not registered as pharmacists. One complaint of the farmer and gardener is that there are not enough pharmacists in the United Kingdom to distribute the poisonous materials which they require. Therefore the committee suggests that an ironmonger or a

corn merchant might be licensed to sell these poisonous materials where a pharmacist does not exist for the purpose.

On the other hand, in a well and sensibly written minority report Mr. WALTER HILLS maintains that the demand for the relaxation of the statutory restrictions emanates, not from agriculturists or from horticulturists, but from those persons whose natural desire is to promote the sale of their own particular preparations and he cites the remark of a witness who stated as a reason for objecting to the Pharmacy Act that he could not readily introduce poisonous novelties through pharmacists. He points out that this is distinctly a manufacturer's objection and is, in fact, the predominant note throughout the inquiry. Some regard, he adds, must be given to the public side of the question and in his opinion it is an important advantage that pharmacists do act as a restraint upon the development of the retail business in poisonous novelties and do to that extent carry out the object which the legislature had in view in passing the Act. Mr. HILLS, we think, was wrong if he thought that this admission could help his cause, for surely this statement supports the contention of the rest of the committee that the Pharmacy Act interferes with farmers and gardeners obtaining poisonous materials for a legitimate purpose conveniently and that the industries of agriculture and horticulture cannot be conducted *effectively* on modern principles without the *extensive* use of poisonous material (the italics are ours). We have misgivings as to the probable effect of the committee's recommendations should they be adopted in regard to the exemption of industrial poisons from the provisions of the Pharmacy Act. If the representatives of the trade are right in stating that there are not sufficient pharmacists in the country to meet their needs, cannot this deficiency be made good by appointing intelligent licensees, not universally throughout the country, but only in those thinly populated places in which it would not be profitable for a qualified druggist to pursue pharmacy as a profession? We strongly urge that the number of licensees should be strictly limited and that the privilege of selling industrial poisons should be extended only to those districts in which the druggist's shop is within decidedly less easy reach than the ironmonger's or other shops.

As to the additions which it is recommended should be made to the poisons schedule the committee is in the main agreed. The additions to Part I. of Schedule A are cocaine and its salts, preparations containing 1 per cent. or more of morphine, picrotoxin, and vermin killers containing poisons in Part I. The additions to Part II. of the schedule are acetanilide and its preparations, preparations of cocaine, digitalis and its preparations, preparations of morphine containing less than 1 per cent., soluble salts of oxalic acid, mercuric iodide, mercuric sulpho-cyanide, strophanthus and its preparations, and sulphonal. It will be evident from two substances included in this list—viz., acetanilide and sulphonal—that many drugs used for the relief of pain and sleeplessness will have to be marked "poison." Finally, Mr. ALEXANDER CROSS in a supplementary report makes the suggestion that power should be given to local authorities to grant licences to suitable persons to assist medical men in dispensing prescriptions when it becomes necessary to do so in the absence of the medical man, whether such persons have passed the Pharmaceutical Society examination or not. Our readers will agree with us in thinking that the suggestion is too ridiculous to be discussed. We can hardly believe that Mr. CROSS is serious when he suggests that local authorities should have the power to grant licences to suitable persons for dispensing prescriptions. What do "local authorities" as a rule know about poisons? and how are they going to lay their hands on "suitable persons"?

Annotations.

"Ne quid nimis."

COTTAGE HOMES FOR PAUPER CHILDREN.

THE Hackney board of guardians has decided to spend about £50,000 upon the provision of cottage homes for the children of the union. The Plymouth guardians have adopted a similar method for the accommodation and education of their little ones. In the latter case new structures are not to be erected for the purposes mentioned. Substantially built houses in good residential districts have been purchased. These not being aggregated have received the name of "Scattered Homes." At Bath, at Sheffield, and at many other places separate buildings, each containing a small number of children, are now established. Boards of guardians in different parts of the kingdom are moving in the same direction. Apparently at no distant date we may expect to see all the healthy "children of the parish" located in medium-sized detached houses. The large district schools are out of favour. They will probably soon be broken up into separate homes. They have had a bad name given to them and the name has been as potent as the arguments in undermining their reputations. Yet the schools have done good work and they effected a vast improvement on the conditions that preceded them. So think many who have been intimately connected with their administration for long periods. Be this as it may, cottage homes are now to be substituted. They represent the embodiment of the latest suggestions for what has been called the depauperisation of the parish child. They are being instituted in the fervent hope that the boys and the maids in due time may leave them with regret, taking with them no taint of pauperism, having healthy bodies and self-reliant natures, possessed of knowledge of what a home really is and of the various duties that must be performed in every house in order to make it and to keep it a healthy and comfortable place of abode. To this end the amount of education to be given by means of books will be just so much as is possible in the time afforded, but instruction in such matters as the preparation of the daily food, the making and the repairing of the clothing, and the arrangement and cleansing of every department of an ordinary dwelling will be imparted in an interesting and practical manner. Will this new system be a continued success, or will a departmental committee after a few years swoop down upon it and urge its abolition with a report on its shortcomings? Time only can give the answer. So far the system has certainly presented itself in a very favourable light; but we are convinced that it will stand or fall, not by reason of its perfection or imperfection, but by the merits and action of those upon whom the duty of carrying it out may be placed. By far the most important of these will be the matrons or "mothers." Provided that the guardians exercise a wise discrimination in the selection of suitable persons to hold office as foster-mothers and that these on their part exhibit skill, good

temper, and energy in the performance of their almost parental duties, then the results should be very good.

THE ROYAL DENTAL HOSPITAL AND ITS ANÆSTHETISTS.

WE are very glad to learn that the summary dismissal of the anæsthetists of the Royal Dental Hospital from their appointments is not to take place. Our readers are familiar with the situation which was recently set out in our columns.[1] At a meeting of past and present anæsthetists of the hospital on Feb. 10th the following motion was unanimously carried:—

That this meeting, whilst fully endorsing the protest recently made by the staff of anæsthetists to the managing committee, desires to express to the committee the opinion that, by the radical change in the anæsthetics department which is proposed, no small degree of responsibility will be incurred, and that such a departure from a time-honoured system as that contemplated is not only opposed to the interests of the hospital but to the safety of the patients treated within its walls.

The resolution was considered by the managing committee of the hospital at its meeting on Feb. 19th, when it was resolved:—

That the changes recommended in the report of the sub-committee appointed Nov. 18th, 1902, and adopted by this committee on Dec. 18th, 1902, be deferred.

That with the object of having the question reconsidered the anæsthetists be asked to submit to the managing committee a scheme for the efficient working of the anæsthetic department of the hospital.

The managing committee in communicating this resolution to the anæsthetists has expressed its assurance that the anæsthetists will willingly carry out the duties of the department during the interregnum. This we are sure that they will do, and we trust that they will also bring a business sense of what is really wanted to the drawing up of a plan for the proper working of their department. It is so usually taken as a sign of strength and wisdom not to change a declared intention that we congratulate the managing committee upon not being afraid to wait and to reconsider its startling decisions. We hope that it will find itself able to adopt, at least in essentials, the scheme to be submitted to it by the anæsthetists.

A FORGOTTEN EMBRYOLOGIST.

PROBABLY few of the readers of THE LANCET have heard of the embryologist, Sebastian Graf von Tredern, the romance of whose life and work forms the subject of a brief feuilleton in the *Wiener Medicinische Wochenschrift* of Feb. 14th. Born in France, at Brest, in 1780 and exiled to Russia in his fifteenth year, he became an officer in the Russian navy, then studied medicine in Germany, at Würzburg and Göttingen, graduated as doctor of medicine at the University of Jena, and a little later returned to France to enter the navy as a surgeon; being sent to Gaudeloupe in the West Indies he founded a hospital there and died shortly afterwards in his thirty-first or thirty-second year, though the exact date of his death is unknown. His father, a member of an old Breton family, was a captain in the French navy, but being exiled to Russia after the battle of Quiberon in 1795 and being kindly received by the Emperor Paul he entered his son Sebastian as a midshipman in the Russian navy. While stationed at the harbour of Reval in Esthonia he began his noteworthy researches on the embryology of the chick, though it is unknown whether he had received any previous training in natural history. The memory of the young officer who dissected animals, kept hens to brood over eggs, and who was, moreover, a clever painter lived long in the minds of his contemporaries. He left the Russian navy in August, 1801, being then 21 years of age, and till October, 1804, nothing is known of him, but on this date Sebastian Graf von Tredern of Livonia matriculated as a student of medicine at Würzburg. While at Würzburg he worked with Döllinger and pursued his embryological researches with the utmost diligence. None of his contemporaries seem to have had the slightest suspicion of his French nationality, as he was regarded as a German from Livonia, and his amiable personality, good fellowship, and skill in the concoction of punch and similar beverages—no doubt the result of his naval experience—rendered him a universal favourite. In 1807 he repaired to Göttingen and discussed the publication of a large work on the development of the chick with Blumenbach who advised him to use a small part of his rich collection of material as a dissertation for his doctorate. This advice von Tredern acted upon and worked in Göttingen; here, again, according to the statements of some of his contemporaries, he was regarded as a German, his real nationality being concealed. Having prepared his dissertation he had it printed in Jena and was awarded his doctorate with distinction. In this work he announces his intention of carrying out a complete work on the subject, which intention unfortunately he did not carry out. In 1811 he passed the State examination at Paris and entered the French navy and shortly afterwards died at Gaudeloupe. With regard to the dissertation, it consists of only a few pages but has attached to it a splendid plate, the figures of which, though simple outlines, show a wonderful richness in detail, and the whole work indicates such great ability, such wide knowledge of the literature of the subject, and such capacity for research that the abandoning of the work and the early death of its author were undoubtedly a great loss to embryological science. The reasons for his giving up research for practice and his return to France are unknown and are among the mysteries with which this strange history of a short life abounds.

AMALGAMATION OF POOR-LAW UNIONS IN WESTMINSTER.

THE Westminster city council has suggested that the three unions in that city should be amalgamated. The St. George's union contains a population of 128,000, the Westminster union has 33,000, and the Strand union has only 21,000. When the disparity in the sizes of these unions, the great number of separate official buildings, and the multiplication of staffs necessary for the carrying out of the work of the Poor-law relief are taken into consideration, the fusing of the three appears to be a wise and economical procedure. The point, however, that more especially interests us in the proposal to amalgamate the three unions is the opportunity that would be afforded after the junction of initiating a much-needed and often-suggested reform—namely, that of a better classification of the indoor poor. Time after time has a demand been made for the separation of the infirm from the able-bodied and of the quiet and well-behaved from the noisy and dissipated. The public asks for a separation that shall be complete and that will allow an entirely different treatment of the two classes in the matters of comforts and privileges. Accommodation in adjoining rooms is not the separation that is required. Hitherto it has been found impossible to effect a classification satisfactory in all respects in any one workhouse. Two difficulties are met with—the classes are too numerous for arrangement in one building, ages, sexes, and morals rendering them so, and the numbers in the various classes are ever changing. Thus there might be at one period great overcrowding in a certain class and at another great waste of space owing to diminished numbers. The London unions at the present time own about 38 workhouses. It is futile to urge that in each of these there should be a classification of the inmates. If the workhouses themselves could be classified a solution of the problem would be in sight. Some of them might be set apart for the reception of the married couples, others might be devoted to the infirm, and others to the aged but not infirm. It would then be possible to

[1] THE LANCET, Feb. 14th, 1903, p. 453.

bestow upon these broken-down inmates more comforts, a greater freedom, and opportunities for interesting occupation. To all these amenities the aged poor are admitted to be entitled, but there is little hope that they can ever obtain them so long as they share residences with the young, the able-bodied, and the badly behaved. The new union will possess four workhouses and several other large buildings, such as schools or receiving houses. Here then is a chance for the distribution of the poor upon an approved system—a system that would be much more kind but not more costly than the one which now obtains. It is to be hoped that the guardians of the three unions will look upon the proposed scheme with favour. To do so will, however, demand the exercise of a certain amount of magnanimity, for under the new conditions some of the guardians must necessarily cease to hold office.

PARATYPHOID FEVER.

A DISEASE closely resembling typhoid fever and due to a similar and no doubt allied organism has of late attracted considerable attention from pathologists in France, Germany, and America. In the *Boston Medical and Surgical Journal* of Feb. 5th Dr. Joseph H. Pratt has published three cases of the disease and has reviewed its literature. In certain typical cases of typhoid fever the Widal reaction is persistently absent. In 1897 Gwyn studied such a case in Osler's clinic at the Johns Hopkins Hospital. There were pyrexia, enlarged spleen, rose spots, delirium, diazo reaction, and intestinal hæmorrhage. From the blood a bacillus was obtained intermediate in type between the typhoid and colon bacilli. This bacillus belonged to a group which includes the bacilli of meat poisoning, the bacillus psittacosis, and the bacillus of hog cholera. Members of this group cause fermentation of glucose, thereby resembling the colon bacillus, but, like the typhoid bacillus, they do not form indol or produce gas in lactose media. In 1895 Gilbert gave the name "paracolon" bacilli to this group and in 1896 Archard and Bensaude termed them "paratyphoid" bacilli. The literature of the subject is already considerable. Two species of paratyphoid bacilli have been described by Schotmüller who terms them the "A" and "B" types. Both acidify milk, but the acidity produced by the "A" paratyphoid bacillus persists, while that produced by the "B" paratyphoid bacillus changes to alkalinity. Archard and Bensaude reported the first two cases of "paratyphoid fever" in 1896. At present only 84 cases have been recorded, but the list is rapidly growing. The following is an outline of Dr. Pratt's cases In Case 1 a soldier who was invalided from Cuba while convalescent from typhoid fever complained of swelling of the right testicle. Incision was followed by the discharge of pus containing the "B" paratyphoid bacillus. In Case 2 a girl, aged 18 years, was operated on for cholelithiasis. The gall-bladder contained four calculi of the size of chestnuts and apparently composed of pure cholesterin. From the centres of these the "B" paratyphoid bacillus was cultivated. In Case 3 a man, aged 33 years, had an illness characterised by abdominal pain and tenderness and pyrexia of two weeks' duration. During the third week left saphenous phlebitis developed. The blood serum agglutinated the "A" paratyphoid bacillus in high dilution and failed to agglutinate the "B" paratyphoid and the typhoid bacilli even in low dilution. We may point out that of the conditions present in these three cases two—orchitis and phlebitis—are recognised complications of typhoid fever and that the other one—gall-stones—has been shown by Gilbert and Fournier to be probably a result of typhoid infection of the gall-bladder. As to the pathology of paratyphoid fever, only four cases have been fatal and one of these was secondary to typhoid fever. In the remaining three cases there were no intestinal ulcers and the Peyer's patches and solitary follicles were normal. But the fact that intestinal hæmorrhage occurred in five cases seems to show that intestinal lesions may occur. In two fatal cases the paratyphoid bacillus was found in the blood taken from the heart, liver, lungs, and spleen. Perhaps some of the reported cases of typhoid fever without intestinal lesions are examples of paratyphoid fever. Paratyphoid fever is usually a milder disease than typhoid fever and diarrhœa and termination by crisis appear to be more frequent. The duration has been from 12 to 84 days. Chills have occurred at the onset. Epistaxis has been observed in a number of cases. First and second relapses have been observed. Rose spots and a palpable spleen were present in about half of the cases. The pulse was usually slow. The urine frequently contained albumin. In uncomplicated cases there was no leucocytosis. The number and frequency of the complications are striking. Bronchitis, pneumonia, pleurisy, endocarditis, thrombosis, cerebral embolism, phlebitis, meningitis, peritonitis, cholecystitis, nephritis, cystitis, furuncles, osteomyelitis, myositis, and suppurative arthritis have been observed. As to the diagnosis, our knowledge of paratyphoid fever is largely due to the practice of making blood cultures during life. This procedure has been shown to be a valuable means of early diagnosis of typhoid fever at a time when Widal's reaction is absent and the clinical phenomena are not characteristic.[1] Similarly, the paratyphoid bacillus can be found early in the blood. In a number of cases the diagnosis has been made by cultivating the bacillus from the urine or fæces and showing that it was agglutinated by the patient's blood. If the bacillus cannot be cultivated from the blood, urine, fæces, or some lesion the diagnosis is justified if the blood agglutinates a paratyphoid bacillus in high dilution and fails to agglutinate the typhoid bacillus or agglutinates it only in very low dilution. The blood should be tested with both species of paratyphoid bacilli. A reaction with low dilution is valueless, as it may be obtained in typhoid fever and in other diseases.

THE MEDICAL PROFESSION AND MEDICAL CERTIFICATES.

IT is a well-known fact that no profession does so much for nothing as the medical profession. We are not referring to cases in which medical men give their services out of charity but to cases in which the Government or bodies such as the school board or friendly societies demand certificates for nothing. We should say that by a convenient fiction it is not the school board that demands certificates but the magistrate. For instance, all registered medical men are bound to give gratuitously a certificate of death, under a penalty of 40*s.* if they refuse. The London School Board never pays for a certificate except when one has been taken exception to, and then it gives 2*s.* 6*d.* for confirmation of the certificate. The Post Office also, a Government department which earns some £4,000,000 for the revenue, practically places a quantity of gratuitous work on the shoulders of medical men. The regulations for the appointment of telegraph messengers state that "candidates will be required to produce a satisfactory certificate of health from their own medical attendant on a form to be provided for the purpose and a certificate of having been successfully vaccinated within the last seven years." Now what happens, in rural districts at any rate, is this. The candidate applies to the public vaccinator for vaccination or revaccination and brings with him his form for a certificate of health to be signed by the public vaccinator. The wages of a telegraph messenger are low—i.e., 7*s.* or 8*s.* a week to commence with—and the candidates mostly come from the poorer stratum

[1] THE LANCET, Feb. 8th, 1902, p. 390.

of the population. The parents seldom or never pay any fee and the consequence is that the public vaccinator, who in rural districts is generally the local medical man, fills up the certificate for nothing as an act of charity. It is no part of the duty of the medical profession to protect the Government from enlisting unfit employés, and, in our opinion, the Post Office should certainly pay for the certificate or else should send one of its regular medical officers to make the examination. But even where there is a local postal medical officer it would seem that it is at present no part of his duty to examine candidates for the post of telegraph messengers. Medical men take much time and trouble and spend large sums of money in fitting themselves for registration, but the benefits of registration are very small. The recently appointed Postmaster-General might well see, we think, if he cannot do something to remove the grievance to which we have alluded.

THE DISTRIBUTION OF PLAGUE.

As regards Egypt the Director-General of the Sanitary Department states that during the week ending Feb. 15th neither cases of, nor deaths from, plague have occurred in Egypt. The last case occurred at Tant-el-Ghezireh on Feb. 6th. As regards the Cape Colony the medical officer of health of the colony states that for the week ending Jan. 31st 2 cases of plague were discovered at Port Elizabeth—namely, a native male who was admitted to the observation ward on Jan. 27th and who died from plague on the 29th, and a coloured male who was admitted to the plague hospital on Jan. 31st and who died on the same date. 1 case remained under treatment at the plague hospital, Port Elizabeth, at the end of the week. No case of plague has occurred at any other place in the colony.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

A REVIEW of the history of the British Gynæcological Society formed the theme of the address delivered by the incoming President, Dr. Heywood Smith, at the meeting of the society held on Feb. 12th, an account of which will be found in THE LANCET of Feb. 21st, p. 524. The life of the society is largely contemporaneous with the growth of gynæcology as a special branch of medicine, and in the account given by the President of the work done by the Fellows of the society the successive stages in the development of many of the operative procedures practised at the present day upon the pelvic organs can clearly be traced. If it were possible to assign to any one body of practitioners the credit for the popularisation and perfection of a special operative method, the Fellows of the British Gynæcological Society might well put forward such a claim with regard to the sub-peritoneal or intra-peritoneal treatment of the stump in abdominal hysterectomy. Indeed, Dr. Heywood Smith was one of the first, if not the first, to practise this operation in this country, an advance in the method of treating the stump of the uterus of proved value. The Fellows of the Gynæcological Society have always considered the exhibition of specimens and the reading of clinical cases of the utmost importance, and have placed a higher value upon such contributions than upon the reading of set papers. Of the practical value of the meetings of the society the reports in the journal bear abundant testimony and the President may well say that it has done much for the advancement of the art of gynæcology. The British Gynæcological Society dates its foundation from the year 1884 when it was started by a small band of workers, chief amongst whom were Dr. Robert Barnes, Dr. Alfred Meadows, and the present President. The society was an offshoot from the Obstetrical Society of London, and we, in common with many leaders of the medical profession, regarded the split at the time of its occurrence as distinctly regrettable. This, however, is ancient history, and to-day the society is a successful and progressive one, possessing a good membership and a valuable quarterly journal. The abstracts of foreign literature which form one of the main features of the journal have been of great assistance to workers in gynæcology, and the society is to be congratulated upon the energetic band of workers who have devoted so much time to insuring the success of this part of the publication. The record of the meetings held up to the present date, some 234 in number, bears testimony to the vigour and energy of the Fellows and to the daily advance in the importance of the science and art of gynæcology. An example of the growing specialisation of the work of the gynæcologist is shown by the fact that the council of the society has quite recently determined to institute an examination for the purpose of establishing a criterion by which the efficiency of nurses, especially those devoting themselves to gynæcological nursing, can be determined and to grant a certificate in monthly and gynæcological nursing to those candidates who are approved by the examiners. An important point is that no nurse will be allowed to enter for the examination unless she has had three years' training in a hospital. We are inclined to doubt the wisdom of this new step so far as monthly nurses are concerned. Not only has the Obstetrical Society of London been carrying on for many years a similar examination, but the recent establishment of the Midwives Board appears to us to fulfil all the requirements of the case. The Obstetrical Society, as soon as it is possible for it to do so, will no doubt hand over the conduct of its examinations to the new board and we do not see what advantages a certificate in monthly nursing granted by a private society like the British Gynæcological Society can have over a certificate granted by an official board instituted by Act of Parliament. No doubt a certificate in gynæcological nursing will be found of advantage by nurses intending to devote themselves to that particular branch, and possibly such specialisation in nursing has some advantages. Since, however, it will be purely optional for any nurse to enter for the examination of the society or not, we fail to understand how it is "to prevent the market being flooded with so-called nurses who trade upon the public with inadequate qualifications."

THE PATHOLOGICAL ANATOMY OF SYPHILIS AND OF PARA-SYPHILITIC AFFECTIONS AS OFFERING A BASIS FOR TREATMENT.

FOLLOWING upon the communication of Dr. Leredde of Paris, to which reference was made in an annotation in THE LANCET of Feb. 21st, p. 539, Professor J. Renaut of Lyons contributes a paper on the subject of the pathological anatomy of syphilis and of para-syphilitic affections to the *Philadelphia Medical Journal* of Jan. 17th. The gumma has hitherto been generally regarded by pathologists as the typical lesion of syphilis. Professor Renaut shows that the reaction of the living tissues to the presence of the microbes of syphilis, glanders, and tuberculosis produces local changes of varying character. The gumma is not the only neoplastic product arising from syphilis and moreover its structural character is variable according as it is one of the liver, the myocardium, or the brain, and all these gummata are different from those of the skin. A cerebral gumma is a nodule of which the periphery is constituted by proliferated neuroglia cells and fibres, the interior being a mass of degenerated brain substance the vessels of which have undergone obliterative endarteritis. "Each tissue," adds Professor Renaut, "makes its gumma as it can." The chief lesion of constitutional syphilis is arterial and even in the skin the rash of early secondary syphilis is the outcome of a paresis of the circular muscular fibres of the terminal arterioles of the

skin close to the surface. Thus are produced the areas or patches of cutaneous hyperæmia and redness which constitute the rash. A little amount of endarteritis is also produced, adds Professor Renaut, in these terminal arterioles of the skin, but the lesion is slight and transient as regards the skin. In the later secondary stages of syphilis the endarteritis which may recur in the vessels of the skin, of the viscera, or of the nervous system is more marked. As a result ischæmia of the affected arterial territories follows and the tissues the nutrition of which depends upon the arteries suffer from defect of nutrition. The diseased arterioles become dilated irregularly and hyperæmia or even stasis of circulation results according to the character of the arterial change. Wherever it appears the special virus of syphilis produces subacute endarteritis obliterans, "causing chronic œdema and interstitial proliferation." At first diffuse and affecting vast arterial territories of the skin and body the morbid process limits itself later to special organs and viscera. Thus in tabes it affects the posterior spinal ganglia and columns, and in general paralysis the cerebral cortex and the central grey substance of the ponto-bulbar region. A comparison of the vascular and perivascular changes in syphilis proper and in the parasyphilitic affections, in the opinion of Professor Renaut, leaves little doubt that the two sets of changes are essentially not distinct one from the other. They are, on the contrary, explained by him as depending upon the development of endarteritis, the differences being due to the extent to which endarteritis has advanced. This progressive endarteritis, says Professor Renaut, sets up an œdema and a sclerosis of the parenchymatous tissue: "as the vasculitis progresses so does the sclerosis." In the central nervous system this sclerosis often affects "systems" of nerve cells and fibres as in tabes dorsalis (posterior root neurons). The central nervous system is generally attacked late—i.e., some years after syphilitic infection. And the vascular and interstitial changes produced in the brain by syphilis set up in turn a vicious circle of processes which continually interfere with the nutrition of the nerve cells and lead to their ultimate destruction. The successful treatment of the vascular changes, so as to arrest if not to abolish such changes, must hence, he is of opinion, be the basis for a rational therapy.

THE OVEN AND THE SCREEN.

IT is to be feared that many excellent modes of cooking which prevailed in the past are now abandoned simply to save trouble. The modern cook, or the person who calls herself such, although she may be positively instructed to roast meat in the good old-fashioned way in a screen in front of the fire, commonly ignores her instructions at every possible opportunity and puts the joint in the oven. The introduction of the "kitchener" or the closed range and of the gas cooker probably accounts for the preference which is given to baking while it does away with the necessity of basting and other little but important culinary attentions which roasting involves. There can be little doubt that by this exchange of method not a few persons are dietetic sufferers. The preference for meat openly roasted before the fire is not a mere sentiment, for the flavour of meat so cooked is infinitely superior and the tissue is generally more tender than when it is baked. Now the flavour and tenderness of meat have much to do with its digestibility and consequently with its real value as a food. Without relish and appetite digestion is sluggish and heavy. Indeed, it has been said that the process of digestion commences before ingestion and certainly the digestive functions are stimulated to healthy activity by the sight of a tender and well-cooked morsel as well as by an excellent flavour or aroma. It has been shown that the mere inspection of good tempting foods starts the digestive machinery and immediately excites the flow of the gastric juice. It is, therefore, not unreasonable to suppose that there must be a difference of some dietetic importance produced in the organism when, on the one hand, a baked heavy-looking joint is in contemplation and when, on the other, it is a bright attractive-looking, because an openly roasted, joint. Persons who have their meat from the same butcher naturally exchange opinions about the quality of the meat and it will often be found that when complaints are made chiefly in regard to the toughness and tastelessness of the joint the secret of it frequently is that baking is adopted instead of roasting. As a matter of fact, there is a great difference between the two methods of cooking, baking and roasting. In the former case the meat in reality is cooked in hot air which has a tendency to decompose the fat into acrid substances. When the door of an oven in which a joint is cooking is opened the fumes escape, smelling like a tallow candle which has just been blown out. The smell from a joint being roasted has not this character but, on the contrary, is agreeable. In roasting the joint is cooked by radiation—that is, by the bombardment, so to speak, of heat waves. The air between the fire and the joint might be quite cool yet roasting would proceed all the same. Roasting also is a less rapid method of cooking than is baking and slow cooking has very decided advantages in regard to preserving the nutritive value of the meat. The civilised cook might learn a good deal from the methods of slow cooking adopted by savage tribes. By one method, in which stones made hot with glowing charcoal are employed, a large joint, no matter how tough, may be exquisitely cooked and made tender and tasty and it is doubtful whether any form of so-called civilised cooking can compare with it. The navvy who fries his chop or steak on his spade over a few lighted sticks probably gets more nourishment and derives greater relish from the meat cooked in this way than if it had been baked in an oven.

AN EXPENSIVE FAD.

"CONSCIENTIOUS" and other objectors to vaccination should read and digest the statement of the finance committee of the Metropolitan Asylums Board lately made upon the cost of the recent epidemic of small-pox. It is conceivable that the pocket of the conscientious objector may be as sensitive in one direction as his conscience is in another and that the heavy drain which he, with other ratepayers, incurs through the epidemic which is fostered by non-vaccination may influence his conduct in the future towards the rational measure of efficient vaccination and revaccination. Ordinary arguments and demonstrations do not appeal to the "crank" where his particular pet opinion is concerned, otherwise, of course, the demonstrated value of efficient vaccination would long since have been universally admitted. Half a million of money, however, spent from the rates upon a small-pox epidemic constitutes a substantial argument even in the mind of an objector. We recommend all those who do not approve of vaccination to descend from the heights of argument, where their prejudices render them unassailable, and to tackle the question on a purely material and pecuniary basis. Let them work out how much money would have been saved if all those upon the care of whom half a million pounds were spent had been protected from small-pox by due attention to vaccination and revaccination at the expense of the ratepayer.

ARTERIO-SCLEROSIS AND MENTAL DISEASE.

THE important part played by arterial degeneration in determining cerebral disorders in later life has led Dr. Adolf Meyer of New York, director of the State Pathological Institute, to inquire into the connexion, if any, between arterio-sclerosis and mental disease and an account of his studi is

published in the *New York Medical Record* of Jan. 31st. He concludes that mental disease is not so frequently due to arterio-sclerosis as is commonly believed. Observations on the heart and aorta of the insane showed that arterio-sclerosis was exceedingly frequent, but mental disorder could be ascribed to such a morbid process only when it affected the blood-vessels of the brain. In many cases of advanced chronic insanity or dementia such a condition undoubtedly existed. The progress of arterio-sclerosis in the brain was associated with loss of memory of the immediate past and attacks of mental confusion and transitory delirium. Such dements were found to be liable to indulge in petty larceny and sexual misconduct and they were frequently guilty of attempts to set fire to houses. Mental disease occurring in that period of life when arterio-sclerosis was most common showed, adds Dr. Meyer, no peculiarity in its nature and course that could not be fairly accounted for by the commencing cerebral decadence of later life which was a prominent feature especially in neurotic subjects. Both senile and pre-senile decay of brain power was associated with arterio-sclerosis, but no special arterio-sclerotic insanity could be said to exist. When arterio-sclerosis was associated with insanity the prognosis was naturally more serious, as there was no special treatment for such a diseased condition of the arteries of the brain.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE annual meeting of the general council of King Edward's Hospital Fund for London was held at York House, St. James's, on Feb. 24th, H.R.H. the Prince of Wales being in the chair. The treasurer, Lord Rothschild, submitted the account of receipts and expenditure during the past year ending Dec. 31st, 1902. He mentioned especially the munificent gifts of Lord Strathcona and Lord Mount-Stephen, Mr. Edgar Speyer, and Mrs. Lewis. The receipts during the year had been £604,802 18*s.* 5*d.*, of which £28,729 12*s.* 5*d.* were annual subscriptions, £400,000 was the value of the capital given by Lord Strathcona and Lord Mount-Stephen, and the coronation gift was £118,663 13*s.* 1*d.*, while the balance was made up by other donations and income from investments. £101,000 were distributed in gifts to the hospitals, made up as follows: annual grants to 25 hospitals, £29,150; donations to 80 hospitals, £70,850; grants to 14 convalescent homes, £1000, which amount was received from the trustees of the London Parochial Charities. It may be interesting to mention the eight hospitals which have been allotted the largest grants, viz., London Hospital, annual £5000, donation £3500; Guy's Hospital, annual £5000, donation £2000; Royal London Ophthalmic Hospital, annual £2000, donation £2500; University College Hospital, annual £1000, donation £2500; West London Hospital, annual £1500, donation £2000; King's College Hospital, annual £1000, donation £2000; Tottenham Hospital, annual £1000, donation £2000; Metropolitan Hospital, annual £500, donation £2500. This accounts for £36,000 of the sum distributed. The working expenses amounted to £1942 2*s.* 3*d.* Of the balance of £501,860 16*s.* 2*d.* £425,136 6*s.* had been added to capital account (making it £447,2z5 15*s.* 1*d.*) and £76,724 10*s.* 2*d.* had been added to the general funds account (making it £229,583 6*s.*). Thus the total amount of assets, after deducting liabilities to sundry creditors, (£323 18*s.* 5*d.*), amounted to £676,809 1*s.* 1*d.* to Dec. 31st, 1902, of which £662,000 were invested, producing an income of £24,000 a year. The Prince of Wales, who was congratulated on the success of the Fund, said that the King in his original letter in 1897 stated that their endeavour should be to raise an annual sum of from £100,000 to £150,000, but that to make up their income to £50,000 a year from investments an addition of £870,000 to the capital would be necessary. The visiting committee had been largely increased. It was composed of 23 medical men and 23 laymen. An important resolution had been passed requesting promoters of new hospitals or those reconstructing or extending within the area dealt with by the Fund to submit their proposals to the Fund, as it was felt that an independent authority like that Fund, possessing the willing and expert services of the highest representatives of the medical faculty, could render valuable assistance in such circumstances. The distribution committee was considering what steps could be taken to bring about the desired results in the amalgamation of certain hospitals and the removal of others to places where they were more needed. The scope of the Fund would this year be extended so as to include the London County Council area, when outside the seven-mile radius of Charing Cross, which would include new districts containing many poor and densely populated suburbs. The committee desired to point out that those who live outside London may reasonably be expected to give something to the hospitals of the capital of the Empire, since 25 per cent. of the patients in London hospitals came from outside the metropolis. The Lord Mayor (Sir Marcus Samuel) said that the preparation of accounts in a proper form was as good a work as the distribution of the money, and also that the time was coming when it would be necessary to stop instituting new foundations until those existing had adequate support. Sir John Aird and Lord Rothschild having spoken the Prince of Wales in continuation said that they desired to express sincere gratitude to those who contributed small sums—shillings and pennies, and recognised that the results this year were exceptional and could not be looked for again. He assured his audience that His Majesty watched the growth and vitality of the Fund with as much interest and satisfaction as he did when he was President. The Prince concluded by saying that he was well aware of the heavy sacrifices of time involved by the labours of the council, committees, and officials, for which he offered them his grateful thanks and trusted that they would be kind enough to serve for another year in their respective capacities.

COAL SMOKE ABATEMENT.

FROM some remarks which were made at the annual general meeting of the Coal Smoke Abatement Society held under the presidency of the Duke of Argyll at Grosvenor House on Feb. 24th, it is clear that no country and no place where coal is used are free from the pernicious effects of smoke, but it does not follow that no attempt should be made to combat these effects. In this country public attention has often been called to the evils of coal smoke—its injuriousness to health, its destructive effects upon trees and flowers, its ruinous action upon pictures and furniture have all been noted. But until the advent of the Coal Smoke Abatement Society no organised effort was made to check the ills of which so many complain and which are so undoubted and so serious. At the annual meeting of the society Sir William Richmond, R.A., the president, said that the delightful weather which we had been having for the last two months was in some measure due to the society and there is, we venture to think, a great deal of truth in this audacious statement. From Jan. 1st to Dec. 31st, 1902, the society's inspectors reported the result of 2470 observations which led to the detection of 1831 nuisances and 1701 complaints were forwarded to the corporation of the City of London, the London County Council, borough and district councils, and the port sanitary authority of London. In consequence of these complaints 88 summonses were issued and in 72 cases conviction was obtained with penalties and costs amounting to over £200. The total of the work done since the society was established in 1899 is as follows:

6600 observations have been kept by its inspectors, 4623 nuisances have been reported, 4423 reports have been notified to local authorities, and 330 summonses have been issued, the total fines amounting to £1287. There can be no doubt that considerable practical good has been effected, and if we do not entirely owe the presence of spring during the winter months of January and February to the Coal Smoke Abatement Society we see no reason why the society should not claim credit for a proportion of our unwonted sunshine. Among the speakers at the meeting at Grosvenor House, in addition to the President, were Dr. H. A. Des Vœux (the treasurer of the society), Lord Robert Cecil, K.C., Sir James Crichton Browne, F.R.S., and Mr. W. D. Caröe, and full testimony was borne by all of them to the injury which coal smoke does to the public health and to its demoralising effect upon the people. The report of the society, which contains some very instructive illustrations, can be obtained at 25, Victoria-street, Westminster, S.W.

THE LATE MR. W. J. C. MILLER.

IN our issue of Feb. 21st, p. 541, we announced the death of Mr. W. J. C. Miller who will be known to most of our readers, if not to all, as the late registrar of the General Medical Council. His death occurred on Feb. 11th from bronchitis following influenza, but for some years past he had been suffering from hemiplegia. William Miller was born in 1832 and was educated at the West of England Dissenters' Proprietary College, Taunton. One of his fellow scholars there was the late John Wale Hicks who entered the medical profession and who, afterwards taking holy orders, became Bishop of Bloemfontein. Mr. Miller on leaving Taunton became a teacher at Huddersfield and here began his connexion with the *Educational Times* of which journal he was mathematical editor for nearly 40 years. In 1876 he was appointed registrar to the General Medical Council and took up his abode at Richmond, where he wrote those charming essays about bird life upon many of which we have commented in our pages. In November, 1896, during the session of the General Medical Council, he suffered from aphasia and finally sent in his resignation on May 21st, 1897. The Council had no power to grant a pension, but Mr. Miller was presented with £1000 as a gratuity. A faithful servant of the medical profession he practically finished his life's work in harness. His last days were passed at Bournemouth.

THE PREVALENCE OF SMALL-POX.

THE Local Government Board for Scotland intimates that during the period from Feb. 1st to 15th inclusive 2 cases only of small-pox have been notified to it—viz., another case in Leith Burgh and 1 intimated from Grangemouth Burgh, the case of a seaman on board a ship which arrived at the latter port on Feb. 12th.

THE 130th anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on Saturday, March 7th, at 7.30 P.M. Mr. A. Pearce Gould, the President, will take the chair. In addition to the Presidents of the Royal College of Physicians of London, of the Royal College of Surgeons of England, and of the "Sister Societies," the President and Council will have the honour of including among their guests the Lord High Chancellor, Lord Sandhurst, the Hon. Robert P. Porter, late U.S.A. Commissioner in Cuba, Mr. Balfour Browne, K.C., Mr. Montague Lush, K.C., Sir Thomas Smith, Bart., K.C.V.O., and Sir Thomas Barlow, Bart., K.C.V.O.

Sir Henry Burdett, K.C.B., will open a discussion at the Caxton Hall, Westminster, on March 3rd, before a meeting of the Hospitals Association, on Hospital Sites and Population in London: Ought any, and if so which, of the large hospitals to be moved from their present sites to new ones situated (*a*) in more congested districts or (*b*) in the country? Sir Trevor Lawrence, Bart., treasurer of St. Bartholomew's Hospital, will take the chair at 5 P.M. and tickets can be obtained on application to Mr. Sydney Phillips at St. Thomas's Hospital.

THE death is announced on Feb. 18th of Dr. Thomas Peregrine, formerly of Half Moon-street. Dr. Peregrine was in his ninety-third year. He was educated at St. George's Hospital and at Edinburgh University where he took the degree of M.D. in 1833. He became a Member of the Royal College of Surgeons of England in 1837 and a Member of the Royal College of Physicians of London in 1859. He was also at one time Senior Warden and a member of the Court of Examiners of the Society of Apothecaries of London.

A SESSIONAL meeting of the Sanitary Institute will be held at the Parkes Museum on Wednesday, March 11th, at 8 P.M., when a discussion will take place on Sewage Disposal and the Qualities essential in a Sewage Effluent. The discussion will be opened by Dr. George Reid, medical officer of health to the Staffordshire county council, and a general discussion will follow.

AT the next meeting of the Society of Anæsthetists on March 6th, at 8.30 P.M., Mr. A. Vernon-Harcourt, F.R.S., will read a paper on, and will show, his new chloroform regulating inhaler by which the percentage of chloroform in the vapour inhaled can be, it is claimed, positively controlled. All members of the medical profession are invited to be present.

THE report of the Departmental Committee appointed by the Home Secretary four months ago to draft a scheme for the regulation of cremation proceedings has been issued. The suggestions of the committee are clear and careful and have important medical bearings to which we shall shortly have occasion to direct attention.

THE UNIVERSITIES OF SPAIN.

(FROM A SPECIAL CORRESPONDENT.)

SPAIN is divided for educational purposes into ten districts, each with a university—viz., Madrid, Barcelona, Valencia, Seville, Granada, Valladolid, Santiago, Saragossa, Salamanca, and Oviedo. There is a faculty of medicine at each of these universities except at Salamanca and Oviedo. Each faculty is ruled by a dean (who receives from £190 to £220 per annum) and there are from 16 to 19 professors who are paid from £102 to £175 yearly according to seniority; one professor at Barcelona has an income of £245. At Madrid there are five extraordinary professors for the M.D. degree, as it is almost exclusively in this university that this degree is obtained, but these professors are not more highly paid than are the rest. There are in all about 16,000 students at these ten universities and of these about 7000 are studying medicine, for in Spain every medical man must have a university degree to qualify him for practice. This rule is not an absolute guarantee of the efficiency of the practitioner, for a boy may enter the university at 12 years of age and be a fully qualified doctor at 16 and may then practise if he can find patients to trust him or a newspaper to advertise his precocity, as sometimes happens.

University students must first go through the curriculum at one of the *institutos* or schools for middle-class boys who receive a higher education than do the pupils in the State schools which latter are equivalent to our board schools. Boys who have finished their school training pass an examination and receive the degree of Bachelor (B.A.), which is a necessary step before they can be admitted to a university, so that this examination is equivalent to matriculation in an English university. Spanish

university students are generally much younger than with us, as 16 is a common age for a lad who is entering a university. At the university they have to pass two examinations—the first for the title of "licentiate" and the second for that of "doctor"—and medical students are obliged to go through both courses. They stay at the university about four years.

The medical school at Madrid is in a building distinct from the university and contains dissecting- and lecture-rooms and laboratories which were unfortunately closed for the vacation when I wished to see them.

Besides the ten universities enumerated above there have been others in Spain which are now closed—e.g., that at Toledo, which was founded in 1438 and suppressed in 1807. The most typical and interesting, as well as the oldest, of the Spanish universities is that of Salamanca which was founded in Valencia in 1209 and transferred to Salamanca in 1240. The university of Salamanca played quite an important part in the history of Spain, for from it came almost all the distinguished Spaniards of the sixteenth and seventeenth centuries, though probably Don Quixote's "Bachelor of Salamanca" is the member of this university best known in England. It was to Salamanca that Gil Blas was going when he began his travels. The university was a most distinguished corporation and its representatives with the other grandees swore fealty to the kings of Spain at their accession; it received solemn visits from royal personages, as did our English universities under the Tudors and Stuarts, and, like Oxford and Cambridge also, it advanced money to the kings which was not always repaid. In 1710 the university of Salamanca gave to King Philip V. 330,000 reals and 100 men whom they equipped for war and maintained as English nobles did in feudal times. The Popes on their election informed this university by special letters of their elevation to the Pontifical chair and sent cardinals as legates to visit it and to reform the abuses that crept into its administration, though the Spanish kings were jealous of their interference. Katharine, the daughter of John of Gaunt, presented 2000 florins of gold to the university and her son, King John II., gave to it a palace near to the university buildings for a hospital. John I. had bestowed more than £7 annual income on Salamanca, which Henry III. commuted for the third of the revenues from three townships, and the university maintained 70 professors and raised its magnificent buildings on this income, with the addition of one-ninth of the tithes of the bishopric of Santiago given by Pope Clement V. The university was governed by a rector and he and the professors were chosen annually by the scholars and Masters of Arts until the end of the sixteenth century. The meetings of the governing body were often boisterous and violent; at times the dignitaries even came to blows. When two professors lectured at the same hour they would often quarrel about their auditors and fees. Cervantes in one of his novels says that "students did not come to Salamanca to learn laws, but to break them," and this was likely enough after the Reformation, for great numbers of Roman Catholics from Ireland, England, France, Germany, Flanders, and Italy went there to be taught and no doubt quarrels were of frequent occurrence among young men of so many different nationalities. "The College of the Noble Irish" still exists and is a very handsome building, with spacious and stately rooms and a large library of old works on divinity and a score or two of modern books and even a very few novels among them. The college is somewhat out of repair and the wall-paintings and furniture might be renewed with advantage. In its most flourishing time Salamanca numbered 10,000 students, but now there are not 500. Salamanca itself is quaint and interesting—a typical old-world Spanish city with a large square containing shops under a colonnade decorated with plaques of the heads of the kings of Spain and other distinguished persons, the latest of whom has been dead 200 years. The streets are narrow, the houses are tall with curiously wrought iron gratings to the windows which are far above the heads of the foot-passengers, and there are many convents and churches and very beautiful pavements. In the main square, where is now a garden, there used to be bull-fights formerly. The houses are mouldering away and the servants at the chief hotel are as ignorant of any tongue but their own as those at an inn in York or Exeter. In such a place it is easy to picture the old university life of which records have come down to us—the college inns, which were perilous to life and property even though they were licensed by the senate; the mess-tables for the students, who were of all ages from mere boys to middle-aged men, and the lads thrusting their left hands into the dish and hacking off with the knives which they carried in their boots or at their girdles their portions of meat and occasionally of other students' fingers; the brokers' shops for the sale of all sorts of clothes, both new and second-hand; the 52 printing-houses and 84 bookshops, employing 3600 persons; the broken meats given at the monastery gates to poor students and other beggars; the wine parties given by those who were canvassing for votes from the students in the professorial elections; the nocturnal adventures and serenades beneath those quaintly-barred windows; the fights with the city watch and the other disputes and scandals which were always alarming the town and requiring the intervention of the rector—and small wonder, seeing how many young men from different proud and hot-blooded nations were here assembled. The university was founded literally under the shadow of the Church and was never free from ecclesiastical influence and such influence is evident in all the educational institutions of Spain to this day. Students were not liable to any civil authority but were tried by the vice-chancellor—a practice which led to so many scandals that eventually the king appointed three conservators on behalf of the city to be assessors with the vice-chancellor when he tried the students for serious offences against the citizens.

An interesting feature of university life at Salamanca was the existence of a number of colleges in that city known as the "Greater Colleges" independent of, and even rivalling, the university itself. There were originally four Greater Colleges at Salamanca which were intended for students of theology and canon law and produced so many distinguished students that they eventually destroyed the prestige of the university. At first the competition between these Greater Colleges and the university was healthy for both, but the colleges became too great and wealthy and by the middle of the eighteenth century they had degenerated into hot-beds of vice and were so powerful as to be able to defy the reforms which were attempted. Before the French invasion there were six of these Greater Colleges in Spain, but the French suppressed all but two in Salamanca and one in Valladolid. Besides these so-called Greater Colleges there were four other colleges of the great military orders. These were established in spite of the opposition of the theological colleges and contested their supremacy; one of them—viz., that of the order of Calatrava—still survives. In addition to these there were several other smaller colleges also independent of the university, which are now represented by only one—that of St. Patrick, otherwise "The College of the Noble Irish," mentioned above. Each of these various colleges had its own rector and its own laws, and the result must have been a bewildering chaos. The architecture of those of the university buildings which remain is generally of the Renaissance style modified by Mauresque details, but some parts are Gothic, and so is the heating of the fine library by stoves with flues passing out through the ceiling. There is a very handsome door of hammered iron to the library. The collection of Greek and Latin codices is a very valuable one and has been augmented by those removed from the libraries of the Greater Colleges and from those of the Jesuits and of other convents which have been suppressed.

The university of Granada has now but 500 or 600 students. The university buildings were erected by the Jesuits and are very large and well adapted for their purpose.

Valladolid university (founded in 1346) has about 1000 students, about one-fourth of whom take up medicine, in which faculty there are 16 lectureships with a clinical professor, two assistants, and "a corresponding number of resident pupils." The hospital was built in 1657.

The university of Valencia was founded in 1441 and has now about 2000 students. In this town there is also an independent college (del Patriarca) like the College of St. Patrick at Salamanca.

Barcelona has a university which was founded in 1450. The present buildings are modern, dating from 1873. The library contains 160,000 volumes and has a reading room for 120 students. There are about 2500 students here.

The rector of a Spanish university can have but little time to devote to his university, for he has to supervise the schools of all classes in his district, which may include several provinces; he is also president of the "consultative university council" of the district, which council is composed of the deans of the faculties, of the directors of the superior schools, and of other persons nominated by the Government;

and he has also to keep in good humour the various civil governors of the provinces in his district who are appointed by the Government and are *ex officio* chairmen of what may be considered as the school board of the province. Probably the universities suffer from the multifarious character of the rectorial duties, though the general education of each district may be benefited by this superintendence. The State appoints, or approves of the appointment of, all the heads of the educational department in each province, but education in Spain is still cramped and limited by ecclesiastical interference, as it was in the time when the university of Salamanca was in its most flourishing state. The annual cost of the Spanish universities is borne by the State and is nominally about £130,000, but against this must be set the large sum which is paid by the students for university fees, so that the universities are no great burden on the Spanish exchequer.

MEDICINE AND THE LAW.

Frauds by a Pretended Medical Man.

AN impostor named Bruno Kohnfeldt was sentenced on Feb. 18th at Clerkenwell sessions to four years' penal servitude for a series of frauds after previous convictions and his female accomplice to a shorter term of imprisonment. The case is worthy of the attention of medical men and of members of other learned professions, because it shows how easily they may become the victims of begging letter writers owing to their names appearing with their addresses in official directories and also how a little care and trouble may sometimes expose fraud of this kind. Kohnfeldt's plan was to represent himself as a medical man benevolently interested in a patient in reduced circumstances. The person on whose behalf he solicited assistance was stated to have been at college with the person addressed and a university calendar supplied a suitable name. He presumably took his chance as to the person addressed having more or less lost sight of the person written about, as he also accepted the risk of what might occur if inquiry was made. To take an example from the evidence of a particular case given at the police-court, Kohnfeldt wrote to the Bishop of London saying that he had attended in illness a gentleman named who had in fact been a fellow undergraduate of his lordship at Keble College and who, he alleged, was now in poverty and bad health, so that a contribution towards buying him a small business would be of assistance. The bishop accordingly directed his private secretary to send £5. The story was a plausible one, but at the same time it was one not difficult to sift. The impostor described himself as "Dr. Charles McCann" and wrote from an address in Bloomsbury. Inspection of the Medical Directory would have shown that Mr. Charles McCann, therein described with his qualifications, had retired from practice and neither the Medical Directory nor the Medical Register would have lent any colour to the suggestion that he was practising in Bloomsbury. If, however, no such work of reference was at hand the ordinary Post-office Directory would have afforded presumptive evidence that Dr. McCann did *not* live at the address given, which was that of a hairdresser who took in Kohnfeldt's letters. The name of the person for whom assistance was asked is to be found in the Oxford University Calendar as a contemporary of Bishop Ingram, and that is presumably where Kohnfeldt obtained it, having access to one of the free libraries that are now common in the metropolis. The latest edition of the calendar, however, shows that the name of the gentleman in question is still borne on the books of his college and that he is a doctor of medicine. Again the Medical Directory or Medical Register might have been referred to, and would have shown him apparently carrying on a practice not far from London, where direct communication might have been opened with him. As an alternative a letter to Keble College would have presumably elicited information, as members of a college who have taken doctors' degrees are not usually altogether lost sight of by their *alma mater*. In another case upon which Kohnfeldt was convicted the person duped was a clergyman and so was he on whose behalf aid was solicited, his name appearing as such in the Oxford Calendar, while his address is given in the Clergy List. Books of reference of this kind may not be in every house, but they are usually to be found in club libraries and other places accessible to those whose pecuniary position enables them to be liberal as well as kind-hearted, as well as in the free libraries, where they are at the service of any knave who chooses to make use of them. Indiscriminate charity does more harm than good even where no direct fraud, such as that described, is attempted, while inquiry may enable the generous to give substantial assistance in cases where help is needed and likely to be effective.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB. 26, 1825.

ST. THOMAS'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—If I should begin my letter as most persons do, who wish to procure an early insertion, I should say that I have derived much pleasure from the perusal of your *extensively circulated* Journal; but this would be telling you a sort of truism, for although some of your remarks are severe and searching, and some prudishly hint that *The Lancet* is a little too sharp, yet all the physicians, surgeons, midwifers, and apothecaries, within the scope of my acquaintance, read it with avidity, and, I suppose, do so for the same reason that I have lately done, because they reap from it information and amusement. Now I have always heard you described as a *hic et ubique*—a here, there, and everywhere sort of gentleman,—assuming such a questionable shape, that I have seen four individuals, unless "mine eyes are made the fools o' the other senses," as different in their figures and physiognomies as the four *Prices* of city notoriety, represented each as the Editor of the Lancet. Pray be good enough to inform me, Sir, if you have the wonderful faculty of splitting yourself into quarters, and sprouting up entire "*Dramatis Personæ*," in as many distant places at the same time? Or is your presence, "the terror of evil doers," imaginary only, the mere false creation of perturbed minds and misgiving consciences? Indeed I am inclined to think that the latter conjecture is correct, for, as M. Ragniot and I were walking quietly through the wards of St. Thomas's Hospital one afternoon, we came unnoticed behind a gentleman who was soliloquizing by a window; his mood was pensive, and his eyes directed to the floor; as we came nearer, we heard him repeating what we deemed a parody on the words of Macbeth. He proceeded thus—

"Is this a *Lancet* which I see before me;—
Or art thou but a dagger of the mind,—a—?
I have thee not, but—let me clutch thee once—and—"

then he stamped on the floor, which roused him from his reverie, and observed us, and made a sudden retreat, looking very dejected. Our appearance unfortunately interrupted him, or we should certainly have been favoured with some further disclosure of this "mind diseased." Had we heard a man muttering thus in another part of the building, we should have set him down a "*Hospital idiot*," but how were we surprised to find from the nurse that the unfortunate gentleman, who had just left the ward, belonged to a society of men called in this country "*pure* surgeons." This was a strange sort of adventure, and neither M.R. nor myself could make it out for some time, but my companion at last suggested that he had either bled some poor mortal to death, or that he intended to commit an act of *felo de se* with the same little instrument.

I was not satisfied, however, with this, and determined to extend my ramble in hope of gaining further information, and fortunately met with an old pupil, to whom I communicated what I had seen. He laughed heartily, and then began to unravel the mystery. "Oh! said he, since you have been on the Continent, there has been quite a revolution in the professional discipline of the hospitals; you know what used to be called going round the wards with the surgeons, the most you could ever extract from them were monosyllabic answers to questions, however interesting or important. Mum was the order of the day, as if their air passages were hermetically sealed, or as if they laboured under *cynanche laryngitis*, so that every attempt at articulation produced pain. As to anything in the shape of a 'practical observation,' that was quite out of the question;

they would whirl round the angles so dexterously, and skip up two or three stairs at a step, that before all the young vultures after knowledge were fairly into a ward, the surgeon-general for the week would be deliberately pacing the next, and this used to be called 'Hospital Practice.'" "True, said I, but how is it now!" "Now! why it is altogether different, as you will soon have an opportunity of observing, and here is the instrument that has effected the change (pulling from his pocket one of your Lancets, Mr. Editor;) you see what is said here of 'Hole and Corner Surgery;' well, they were so phlebotomised with this Lancet, that they have been completely cured of their *cynanche* and sullenness, and the point of consistency is now exceeded as much as their exertions before fell short of their duties. We have quite an overflow of instruction, quite a gratuity of prelections; we have clinicals upon clinicals, demonstrations, observations, and examinations following so closely the heels of each other, that we have scarcely time to digest our dinners, much less the discourses."

I felt highly gratified at the explanation my old acquaintance had given, and could not resist the strong inclination I felt of thanking you, Sir, for the beneficial change which has been effected in the Borough, and have to request, for the benefit of the younger members of the profession, that you will shortly explore other *dark places of the earth*, and rid them of their malpractices as effectually as you have done the "holes and corners" of St. Thomas's Hospital.

Yours truly,

A TOURIST.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8433 births and 4841 deaths were registered during the week ending Feb. 21st. The annual rate of mortality in these towns, which had been 18·1, 17·9, and 17·1 per 1000 in the three preceding weeks, further declined last week to 16·7 per 1000. In London the death-rate was 17·6 per 1000, while it averaged 16·4 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 4·1 in Burton-on-Trent and in King's Norton, 7·4 in Willesden, 7·9 in Aston Manor, 8·0 in East Ham, 8·7 in Birkenhead, 8·9 in Smethwick and in Tynemouth, and 9·1 in Handsworth; the highest rates were 20·4 in Burnley, 21·0 in Wigan, in Salford, and in Oldham, 21·2 in Liverpool, 21·4 in Hanley and in Rhondda, 23·3i n South Shields, and 24·1 in Great Yarmouth. The 4841 deaths in these towns last week included 452 which were referred to the principal infectious diseases, against 493, 512, and 457 in the three preceding weeks; of these 452 deaths 120 resulted from whooping-cough, 94 from measles, 78 from diphtheria, 70 from diarrhœa, 49 from scarlet fever, 28 from "fever" (principally enteric), and 13 from small-pox. No death from any of these diseases was registered in Hastings, Plymouth, Burton-on-Trent, Handsworth, King's Norton, Aston Manor, Grimsby, Wallasey, St. Helens, Warrington, Gateshead, or Newport (Mon.); while the highest death-rates from the principal infectious diseases were recorded in Devonport, Stockport, Wigan, Manchester, Oldham, Preston, Rotherham, and Middlesbrough. The greatest proportional mortality from measles occurred in Devonport, Wigan, Salford, and Middlesbrough; from scarlet fever in Stockport and Oldham; from diphtheria in Hanley and Bury; from whooping-cough in Hornsey, Southampton, Great Yarmouth, Stockport, Oldham, Preston, Rotherham, and Rhondda; and from "fever" in Middlesbrough. Six fatal cases of small-pox were registered in Liverpool, two in Manchester, two in Leeds, and one each in Birmingham, Oldham, and Rotherham. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been seven, six, and six at the end of the three preceding weeks, had increased to eight at the end of last week; seven new cases were admitted during the week, against six, four, and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday, Feb. 21st, was 1893, against numbers declining from 2528 to 1919 on the eight preceding Saturdays; 206 new cases were admitted during last week, against 226, 189, and 246 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 355, 315, and 267 in the three preceding weeks, rose again last week to 274, but were 218 below the corrected average number. The deaths in London directly attributed to influenza numbered 25 last week, having been 25, 39, and 24 in the three preceding weeks. The causes of 62, or 1·3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Manchester, Salford, Leeds, Newcastle-on-Tyne, and in 44 other smaller towns; the largest proportions of uncertified deaths were registered in Leyton, Hanley, Liverpool, St. Helens, Sunderland, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21·3, 21·7, and 18·1 per 1000 in the three preceding weeks, was again 18·1 per 1000 during the week ending Feb. 21st, and was 1·4 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·3 in Greenock and 12·4 in Leith to 22·6 in Aberdeen and 24·8 in Perth. The 592 deaths in these towns included 26 which were referred to whooping-cough, 18 to diarrhœa, 12 to measles, eight to "fever," seven to scarlet fever, and five to whooping-cough, but not one to small-pox. In all, 76 deaths resulted from these principal infectious diseases last week, against 81, 80, and 85 in the three preceding weeks. These 76 deaths were equal to an annual rate of 2·3 per 1000, which was 0·7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 28 and 32 in the two preceding weeks, declined again last week to 26, of which 20 were registered in Glasgow, two in Dundee, and two in Paisley. The deaths from diarrhœa, which had been 19 and 16 in the two preceding weeks, rose again last week to 18, and included eight in Glasgow, five in Dundee, and three in Edinburgh. The fatal cases of measles, which had been 20, 16, and 15 in the three preceding weeks, further declined last week to 12, of which 10 occurred in Aberdeen and two in Edinburgh. The deaths referred to different forms of "fever," which had been five, six, and 11 in the three preceding weeks, declined again to eight last week, and included seven in Glasgow. The fatal cases of scarlet fever, which had been four, four, and eight in the three preceding weeks, declined again last week to seven, of which three occurred in Glasgow and two in Paisley. The deaths from diphtheria, which had been seven and three in the two preceding weeks, rose again to five last week, and included two in Edinburgh and two in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 173, 134, and 112 in the three preceding weeks, further decreased last week to 109, showing a decline of 115 from the number in the corresponding period of last year. The causes of 23, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8, 26·4, and 25·0 per 1000 in the three preceding weeks, further declined to 20·6 per 1000 during the week ending Feb. 21st. During the past four weeks the death-rate has averaged 24·2 per 1000, the rates during the same period being 17·5 in London and 16·1 in Edinburgh. The 150 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 32 from the number in the preceding week, and included 18 which were referred to the principal infectious diseases, against 10, nine, and four in the three preceding weeks; of these, six resulted from measles, four from scarlet fever, three from diphtheria, three from whooping-cough, one from "fever," and one from diarrhœa. These 18 deaths were equal to an annual rate of 2·5 per 1000, the death-rates last week from the same diseases being 1·9 in London and 1·3 in Edinburgh. The six fatal cases of measles showed an excess of four over the number in the preceding week. The deaths from scarlet fever, which had been three, two, and three in the three preceding weeks, further rose last week to four. The fatal cases of diphtheria, which had been three and one in the two preceding weeks, rose again to three last week. The three deaths from whooping-cough corresponded with the number in each of the two preceding weeks. The 150 deaths in Dublin last week included 21 of children under one year of age and 37 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a considerable decline from the numbers recorded in

the preceding week. Four inquest cases and three deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of six, or 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon J. H. Stenhouse to the *Bonaventure*. Surgeons: R. R. Fasson to the *Vivid*, for Keyham Yard; P. K. Nix to Plymouth Hospital; G. Gibson to R.M. Depôt, Deal; E. S. Reid to R.M. Artillery; and H. Spicer to the *Royal Oak*.

The undermentioned Surgeons have been advanced to the rank of Staff Surgeon in His Majesty's Fleet:—Thomas Christopher Meikle, Joseph Cudlip Wood, Horace Bruce Marriott, Norman Lloyd Richards, Ernest Alfred Penfold, Ernest James Finch, John Kirkup Robinson, and Hugh Clift.

ROYAL ARMY MEDICAL CORPS.

The date of retirement of Lieutenant-Colonel T. B. A. Tuckey is Jan. 6th, 1903.

Lieutenant-Colonel F. W. Trevor to be Colonel, vice J. L. Notter, retired. Dated Jan. 14th, 1903.

The undermentioned Majors to be Lieutenant-Colonels (dated Feb. 3rd, 1903):—W. G. Macpherson, C.M.G., R. J. S. Simpson, C.M.G., E. V. A. Phipps, A. Baird, T. W. O'H. Hamilton, C.M.G., D. Semple, J. R. Stuart, and R. P. Bond.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major G. F. England to be Surgeon-Lieutenant-Colonel (dated Feb. 1st, 1903); Surgeon-Lieutenant W. O. Evans to be Surgeon-Captain (dated Feb. 21st, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Lanarkshire: Surgeon-Lieutenant-Colonel J. S. Cumming resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. Dated Feb. 21st, 1903.

Rifle: 3rd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Major F. J. Walker to be Surgeon-Lieutenant-Colonel. Dated Feb. 21st, 1903. 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment: Supernumerary Surgeon-Lieutenant R. W. Mitchell to be Surgeon-Captain. Dated Feb. 21st, 1903. 1st Lanarkshire: Surgeon-Captain R. C. Lees to be Surgeon-Major. Dated Feb. 21st, 1903. 1st Cadet Battalion the King's Royal Rifle Corps: St. John Frank Blake-Campbell to be Surgeon-Lieutenant. Dated Feb. 10th, 1903.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

2nd London: The transfer of the undermentioned officers from the 5th Middlesex (West) Volunteer Rifle Corps bears date April 16th, 1902, viz.:—Captain J. N. Brown and Lieutenant E. C. Montgomery-Smith.

ROYAL ARMY MEDICAL CORPS.

The followirg is a list of appointments as Lieutenants in the Royal Army Medical Corps:—

*A. R. Smallman.	C. A. J. A. Balck.	D. S. Skelton.
†W. F. Tyndale, C.M.G.	R. Storrs.	C. V. B Stanley.
P. Davidson, D.S.O.	R. L. V. Foster.	H. G. S. Webb.
‡J. McKenzie.	F. A. H. Clarke.	W. W. Browne.
§W. B. Taylor.	G. A. K. B. Reed.	R. Rutherford.
N. D. Walker.	G. W. Smith.	W. D. C. Kelly.
A. H. Hayes.	J. W. S. Succombe.	N. E. J. Harding.
H. J. Crossley.	J. M. H. Conway.	W. C. Rivers.
R. B. Ainsworth.	S. M. W. Meadows.	R. J. Franklin.
	H. V. Bagshawe.	

* Gained the Herbert Prize and the Parkes Memorial Bronze Medal.
† Gained the prize in Pathology.
‡ Gained the Marshall Webb Prize.
§ Gained the De Chaumont Prize and the prize given for Aldershot course.

TUBERCULOSIS IN THE FRENCH ARMY.

In the exordium of his new work "La Tuberculose dans l'Armée"[1] Inspector-General A. Kelsch makes the discouraging avowal that in spite of all the prophylactic measures which have been enforced for upwards of ten years tuberculosis is still progressing in the French army. The percentage of cases is greater than it used to be, but the cause of the increase is solely due to the prevalence of the disease amongst young soldiers. The veterans suffer to a much less extent than they did formerly—a reassuring fact which is taken as proof of the practical efficacy of preventive medicine. Recruits on joining are either already contaminated with the germs of the complaint or else, owing to their imperfect constitutional defences, they are unable to resist the infection to which in their new mode of life they necessarily become exposed. Inspector-General Kelsch lays stress upon the extreme importance of the secondary causes in the genesis of tuberculosis. Doubtless the bacillus is the immediate agent in the production of the disease, but not even the most virulent of microbes can prevail where the fortifications are effective. The most solid foundation upon which to erect the rampart of prophylaxis is the development of physical vigour, together with the amelioration of hygienic and social conditions.

[1] Published by Octave Doin, Paris.

NEW REGULATIONS FOR PROBATIONERS OF THE INDIAN MEDICAL SERVICE.

The Secretary of State has sanctioned the following changes in conditions in order to place probationers of the Indian Medical Service on the same footing as those of the Royal Army Medical Corps:—(1) Their title to be changed from surgeon on probation to lieutenant on probation; (2) their pay (exclusive of allowances) to be raised to 14*s.* a day; (3) their commissions as lieutenants to bear the date on which their course of instruction begins, their appointments not, however, being gazetted until they have passed the final examination; and (4) a lieutenant on probation who at the time of passing the examination for admission to the service may hold, or be about to hold, a resident appointment in a recognised civil hospital to be seconded, if fully approved, for one year; while seconded, such officer shall receive no pay from Indian funds, but his service in the civil capacity may be allowed to reckon towards promotion and increase of pay and pension.

THE ALEXANDER MEMORIAL PRIZE.

The prize of £50 and the gold medal of the Alexander Memorial Fund for 1902 have been awarded to Major F. Smith, D.S.O., R.A.M.C. The subject for the next competition is "Syphilis in the Army and its Influence on Military Service, its Causes, Treatment, and the Means which it is Advisable to Adopt for its Prevention." Essays must reach the president of the committee on or before Dec. 31st, 1905, must bear a brief motto, and must be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essays should exceed about 20,000 words exclusive of tables which may be added in the form of appendices. The competition is limited to executive officers of the Army Medical Staff on full pay, and professors and assistant professors at Netley are not eligible while so employed.

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Edward Eustace, A.M.D. (retired), at his residence, Underwood, Cheltenham, on Feb. 16th, in his sixty-second year. He entered the army as assistant surgeon in 1864, became surgeon in 1873, and surgeon-major in 1876, retiring in 1885 with the rank of surgeon-lieutenant-colonel.

Staff-Surgeon Narcissus Collins Hatherly, R.N. (retired), at South Molton, Devon, on Feb. 10th, in his eightieth year. He entered the service in 1845 and became staff surgeon on his retirement in 1862. He was senior medical officer of the expedition in the boats of the *Alarm* and *Vixen* up the San Juan de Nicaragua and was present at the storming of Fort Serapique, 1848 (mentioned in despatches)

THE INDIAN MEDICAL SERVICE EXAMINATION.

A competitive examination for appointments to His Majesty's Indian Medical Service will be held at the Examination Hall, Victoria Embankment, London, about Midsummer next. The number of vacancies for competition and the date of commencement of the examination will be notified hereafter. Application for the regulations for admission to the Indian Medical Service should be addressed to the Under Secretary of State for India, India Office, Whitehall, London, S.W.

The Commander-in-Chief has had conveyed to Lieutenant-Colonel B. M. Skinner, R.A.M.C., Secretary of the Army Medical Service Advisory Board and of Queen Alexandra's Imperial Military Nursing Service, his appreciation of that officer's good service in South Africa, where he was principal medical officer of a division.

THE FOUNDER OF THE LANCET.

THE picture below is an excellent reproduction of an old print illustrating a parish inquest being conducted by the late Thomas Wakley. The original sketch was obviously made from life, as Mr. Wakley's features are faithfully reproduced. The figure with folded arms standing at the coroner's left hand probably represents Charles Dickens who attended many of Wakley's parish inquests and obtained in this way some of his lurid information upon the working of the Poor-law between 1835 and 1860. The picture occurs in a little book entitled "Scenes in London" in the possession of Mr. C. van Noorden. Our illustration is from a block very courteously and kindly placed at our disposal by the proprietors and the editor of the *Sphere*, in which paper the illustration recently appeared.

A Parish Inquest before Thomas Wakley, M.P., Coroner for West Middlesex.

Correspondence.

"Audi alteram partem."

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET.

SIRS,—Mr. Cuthbert S. Wallace's letter in THE LANCET of Feb. 14th, p. 475, shows that the views put forward by Mr. Watson Cheyne in your issue of Feb. 7th may give rise to differences of opinion. I should therefore like to express my firm belief in Mr. Cheyne's statement that "aseptic surgery as at present defined—that is to say, surgery without the use of antiseptics—is impossible." I have not attempted to work by the aseptic method but I have had the opportunity of watching others doing so. The results are uncertain and failure to avoid septic infection by this method does not depend on the magnitude of the operation or on the gravity of the complications to be dealt with. Failure is as likely to occur in a simple as in a difficult case.

Aseptic surgery may be described as theoretically perfect surgery. But thorough disinfection of the skin without antiseptics is not possible and if the aseptic system teaches, as Mr. Wallace states, that "hands should be kept out of wounds or covered with boiled rubber gloves," the conditions must hamper the operator in abdominal surgery to a degree which, from this one stipulation alone, renders the system impossible. Aseptic surgery requires more care and more skilled assistance than antiseptic surgery does and it is difficult enough to get antiseptic precautions carried out, especially in private houses. Recently I had my attention directed to an error which Mr. Cheyne has also noted. A patient pointed out that her nurse applied a compress so dry that it must have been useless. This was a fault of teaching or of comprehension. I have more than once found on going to operate in a private house that although the nurse had done her best she had quite failed to obtain any water which had not an obvious sediment. Antiseptic surgery is difficult and dangerous in such circumstances and it is quite impossible to give effect to the more minute precautions necessary for aseptic surgery.

I am convinced that Mr. Cheyne is right when he states that the elaborate arrangements with which the aseptic surgeon surrounds himself in his hospital practice in order to prevent all contamination of his wounds are apt to take away the attention of nurses from essential details, and it is certain, as Mr. Wallace points out, that this should not be attributed to the system; but when Mr. Wallace declares that "a student or nurse trained in the antiseptic school is prone to place too much reliance on a wash in chemicals and too little in hot water and soap" the same objection holds good that this is not attributable to the system. The antiseptic system teaches that everything connected with a wound—hands, instruments, patient's skin, &c.—should be made as clean as possible by all ordinary methods and by the use of antiseptics. In recent years, after everything has been made thoroughly clean, I have had all instruments boiled that do not spoil by boiling and I use antiseptic solutions as I did before I resorted to the practice of boiling for disinfecting purposes. I have formed a very firm opinion that many nurses who ought to know better have a tendency to consider the cleaning of instruments less important when they are to be boiled and, I think, some surgeons act on this principle also. I do not suppose this is the result of any teaching, but in my opinion the idea that the most careful cleansing of instruments is not essential to the best results is very strongly to be deprecated. Perfect cleansing is not essential to an individual success or even to a series of successes, but it is essential to the attainment of the best and most constantly successful results.

Another question raised by Mr. Cheyne and Mr. Wallace is the burying of sutures and I am surprised to find that both consider the burying of silkworm gut permissible. Of course, it is possible to bury silkworm gut without inducing sepsis, but I have seen an abdominal scar with the ends of buried silkworm gut sutures like so many pinpoints easily felt under the skin. There could be no peace for the patient until they were removed, and it seems to me obvious that a material so stiff should not be used in this way. The question of suturing abdominal wounds in layers is too large to enter upon here but I am well content with the results, so far as I know them in my own practice, in which I very seldom sew up a wound in layers. I have an objection to buried sutures which is not connected with sepsis. In several cases I have found silk sutures within the abdominal cavity which were apparently in process of absorption but which gave rise to tenderness; on removing them there was no evidence of any septic irritation and certainly no abscess had formed. I therefore always use the silk as thin as possible, often risking a break in tying rather than use a coarser thread. By gradual pressure a very fine ligature may be made to serve where a stronger one is necessary if extreme rapidity in tying it is desired. For this reason, which is not connected with septic mischief, I am induced to use silk more sparingly than I have done in the past, although I do not care to risk the tying of an ovarian pedicle or uterine tissues for the arrest of hæmorrhage with catgut.

I am, Sirs, yours faithfully,

Portman-street, W., Feb. 23rd, 1903. JOHN D. MALCOLM.

To the Editors of THE LANCET.

SIRS,—I have read with interest and not without astonishment Mr. W. Watson Cheyne's criticism of aseptic surgery at the annual meeting of the Harveian Society of London and published in THE LANCET of Feb. 7th, p. 347. It is perfectly evident that Mr. Watson Cheyne is no friend of aseptic methods but is so wedded to the use of antiseptics that he will not take the trouble (that is the word) to give the newer method a fair trial. If he would only do so I am quite sure he would be struck by the improvement in the treatment and condition of the wounds under his care. There seems to be some misconception, to use a mild phrase, as to what aseptic means. Mr. Watson Cheyne's description of aseptic methods is not very full nor is it very convincing. There are far too many omissions in it. It is quite true that the term "aseptic" was defined by Mr. Watson Cheyne in his work on antiseptics published in 1882; but with advancing time and knowledge the same condition can be brought about more thoroughly by means of heat, as regards dressings and instruments, than it can by chemicals. Aseptic surgery is described by Mr. Watson Cheyne's colleagues, Mr. W. Rose and Mr. A. Carless, as the attempt "to eliminate the irritating properties of chemical antiseptics."

To my mind the great principle which underlies the teaching of aseptic surgery is overlooked by those who largely employ antiseptics. In the latter the student has it thoroughly impressed upon him that he must use carbolic or perchloride lotion, iodoform and boric powder to cover the wound and over all medicated gauze. Having used all or any of the above he has discharged his whole duty to his patient. "He used antiseptics." What we want to get him to understand is that a condition of perfect cleanliness (bacteriological) should be arrived at of his hands and the parts to be operated upon and all materials used for the operation. He is not to trust altogether to his chemicals—something else is wanted and I think that *something* is more enforced under modern aseptic than antiseptic methods. It is certainly true that more personal supervision of detail is required in aseptic than in antiseptic surgery, but it is in detail that it tells—in details it counts. Both schools use antiseptics or chemicals for the production of asepsis of hands and parts to be operated upon, but in the antiseptic school the preparations are not so complete nor so thorough as in the aseptic.

It should be impressed on the student that the attention to minute details preceding an operation is of more importance than the use of preventives during an operation where the preliminary details have been omitted. This, to my mind, is the great gulf that separates the methods under dispute and makes the great difference in the results of different surgeons. Mr. Watson Cheyne must have seen many cases with surgeons where this principle was omitted, to the patient's detriment, but where antiseptics were used. As I conceive it and as I practise it the preparation of the patient is of the utmost importance. First, the patient has a bath and the part to be operated upon and the surrounding area are prepared in the following manner: washed with warm water and soap—not for a few minutes only but thoroughly well washed—using for the purpose a large piece of sterilised gauze. No nail brush is required unless it has been well boiled in order to soften its fibres and so prevent abrasion of the skin. At this time the part is shaved, then rubbed thoroughly with turpentine, dried, and finally rubbed freely with methylated spirit. Thereafter gauze wrung out of 1 in 40 lot. ac. carbol. covering a wide area, covered with gutta-percha tissue and left on until the morning. On the operating table the same proceeding is gone through again. Hands washed in running water before and after this second cleaning soaked in 1 in 3000 hyd. biniodide solution. Dry sterile towels surround the area to be operated upon and no further antiseptic is required. The rest of the operation is carried out without the use of any chemical; only sterile saline solution is used for the wound and perfect hæmostasis is aimed at; the wound is closed with or without drainage, as the condition warrants this, but mostly without. A basin of 1 in 3000 or 1 in 4000 hydr. biniodide is placed near the operator and one for the chief assistant for dipping the hands into during the operation and frequently changed. In many case of hernia and abdominal explorations drainage is the exception, the parts being dried and sealed at the end of the operation by collodion and gauze. Large pads of plain sterile gauze are placed upon the wound, and over all a pad made of Hartmann's wood-wool wadding, inclosed in gauze, is firmly placed. Sterilised gauze bandages cover all and primary union is the rule. Since adopting this routine I find house surgeon and nurses to be much more careful and less liable simply to dip their hands in antiseptics only. Surely no surgeon would permit the use of an instrument that had fallen on the floor. Nurses become enthusiasts. Mr. Watson Cheyne's description of the nurse cutting up medicated cotton in squares and placing them in unsterilised towels is no part of a well-planned aseptic operation. Gauze cut in definite sizes *before* sterilisation, all frayed edges being infolded and doubled so that no free threads are admissible and then sterilised, is what is done in a well-planned system; of these first, a size for ordinary mops; secondly, a larger for other purposes; and thirdly, a still larger size for abdominal use. I have seen what Mr. Watson Cheyne describes in an antiseptic theatre, not an aseptic one. But this was on Mr. Watson Cheyne's side of the border. In the same hospital, which is conducted on purely antiseptic lines, I saw a case being brought in for operation for abdominal tumour. The abdomen had never been prepared at all and the house surgeon started with his nail brush and strong perchloride and scrubbed the abdomen most vigorously. If that house surgeon had had a few lessons in aseptic methods I venture to say that he would have taken more pains to prepare his case the evening before and have shown a little consideration for the life that was undoubtedly placed in danger. But this is where the blind faith in antiseptics comes in. Probably the case did well, and the same procedure may again be adopted, with disastrous results. "But antiseptics were used."

Again, in a London hospital where antiseptics are the rule, I saw the assistant surgeon inspect his cases with the dressers. The young gentlemen never removed their outdoor coats, never pulled up their cuffs, or removed their rings but simply dipped their hands in carbolic lotion and gave them a rinse. Will such a so-called washing remove the gross dirt of London smoke? The surgeon only removed his coat when about to do the first dressing of the patient. What was his procedure? He drew up his cuffs, washed his hands casually in the ward basin with soap, rinsed them in carbolic lotion, and, with a "Pardon me," tapped a student who was in his way on the shoulder and straightway proceeded to dress his wound. Instruments should always be boiled in strong soda solution for an hour and all towels used to surround the area to be operated upon should be boiled and thereafter dried and sterilised. In using them dry instead of wet I think it an advantage. The wet towel, if applied hot at first, soon becomes cold and unpleasant and in a measure contributes to increase shock. In view of the fact that "organisms floating in the air are essentially non-pathogenic," I have gradually given up the immersion of instruments during operation. They are removed from the steriliser and placed in the instrument tray, which has a sterilised towel placed in it and one over it, and then only raised when about to begin. All soiled instruments are

placed in a basin of boiled water and cleaned and replaced in the towel after use.

General precautions.—Here it is the duty of the surgeon to devote "extreme attention to the avoidance of any possible contamination," and I do not think antiseptics should be encouraged in this part of the work if it will encourage surgeons to devote less attention. Sponges I have not seen used for some years as the great difficulty is undoubtedly in completely sterilising them. Gauze, as I have described, cut in definite sizes and infolded and sterilised, is infinitely safer. I have had difficulty with imperfectly sterilised catgut but not for some time. It is now prepared by Lockwood's method. Gut for ligature and silkworm gut for suture, and silk and celluloid thread, all well boiled before use, for pedicles and buried sutures have proved satisfactory, but undoubtedly gut is difficult to make aseptic. Gauze will never replace drainage tubes, but it is better to have a gauze packing in an abscess cavity than simply to open and to put in a tube. Such a case should be well opened and dried out with gauze, all débris removed, and then packed with gauze. This is better surgery than simply opening and putting in a tube. Better still is to open freely every recess of the abscess, to wash with saline, or saline and peroxide of hydrogen 5 per cent., and to dry, and then to touch up the interior with pure carbolic acid and to fill the whole wound with methylated spirit; dry now thoroughly with gauze and pack for 48 hours; remove, wash around with spirit, dry, and close. This is the most effective method I have yet come across for tuberculous abscess. The advantage Mr. Watson Cheyne claims for medicated dressings is a further argument in favour of strict asepsis and attention to detail. It ought to be taught that whenever a dressing shows the least suspicion of staining it should be immediately covered by a fresh pad or the dressing changed—knowing that, if this is neglected, the risk of sepsis is too great. On the other hand, surely Mr. Watson Cheyne does not teach that if the dressing contain an antiseptic the dressing need not be changed, "nor does the sepsis spread back to the wound." That "pus means sepsis" should be accepted as a good working maxim. There are a few further details on aseptic methods which Mr. Watson Cheyne has omitted. I would first mention the prominent part that methylated spirit plays in the subsequent dressing of a wound, and the use of rubber gloves, especially in dealing with septic cases, as a protection to the surgeon's hands and in abdominal operations. Finally, it is well known that sterile saline solution is largely used in aseptic surgery for its unirritating qualities. I experimented with baths of lot. ac. carbol. 1 in 100; lot. hyd. perchlor. 1 in 2000; and lot. boric and saline in normal solution, immersing crushed hands and ulcers in them. The saline I found to cause the most rapid granulation and cicatrisation of the wound. Aprons and gowns are essential and need not be discussed. The nurse's position at an operation should be perfectly defined and her duties detailed. There should be one whose duty it is to sterilise the instruments and dressings—the instrument sister—who occupies this place only; another to hold the *basin* containing the sterile mops for the surgeon—*not to hand them to him;* another to attend to the receiver for soiled mops, dressing, &c.; and, lastly, one to look after irrigation: all to have their sleeves rolled up beyond the elbows and to have their hands and arms well washed and clean. That nurses will take all the trouble required I have found from experience, but they must be taught it and have the example of consistency set them, the surgeon not going into his bag and doing a lot of thoughtless things after having sterilised his hands.

That the aseptic method can be successfully carried out in private practice I have no doubt, as all that is wanted is a kettle of boiled and one of boiling water and plenty of freshly laundried towels. The rest is easy and all a matter of routine, detail, and constant watchfulness. The work that Lord Lister began in Glasgow cannot stand still, and it seems to me that the great benefits that were commenced by him then are finding their logical conclusion and perfection in the very attention to detail and "trouble" he then advocated and practised and are more certainly likely to be accomplished by the steam sterilisation of dressings and instruments and the strict attention to aseptic detail, instead of taking one's chance of the medicated dressings being sufficient to kill every organism that may come their way.

I am, Sirs, yours faithfully,

JAMES LAURIE, M.B., C.M. Glasg.

Greenock, Feb. 13th, 1903.

POLYMASTISM AND POLYPARITY.

To the Editors of THE LANCET.

SIRS,—As the subject of multiple pregnancies is under discussion in your columns, it occurs to me that it may interest your readers to have their attention called to certain relations between polyparity and polymastism which have not hitherto been noticed. Both these anomalies may, I think, be ascribed to reversion. As I. G. St. Hilaire has remarked: "Un individu remarquable par des formes anomales, tombe presque toujours par cela même dans les formes normales d'un autre âge, d'un autre sexe, ou d'une autre espèce." It is under the last of these headings that the anomalies I am considering may be classed.

Among mammalia numerous mammæ in two parallel series are the rule, and for only a single pair to be found—as in mankind—is most exceptional. Now there is a certain relation between the number of mammæ met with in the mature female and the number of young brought forth at a birth, the former being, as a rule, twice as numerous as the latter. It accords with this, that polyparity is the rule among mammalia and that the human uniparity is exceptional. It is a curious fact that in early embryonic life even human beings have multiple mammary rudiments—arranged just like the mammæ of most adult mammals—although all but a single pair of them, as a rule, subsequently abort. As the individual development is generally regarded by biologists as a kind of epitome of that of the race, it may be concluded from this and from other considerations, that human polymastism is a reversion to a primitive condition in which many glands were developed and many young were brought forth at a birth, as is now the case with most mammalia. The transition from polymastism to bimastism may be seen going on in lemurs, whose inguinal and abdominal mammæ are disappearing, so that only one or two pairs of pectoral mammæ are now well developed; and this change has been correlated with diminution in the number of young brought forth at a birth.

Thus it seems certain that the reduction of the primitively multiple human mammæ to a single pair has been brought about in consequence of the change from polyparity to uniparity. Other changes consequent on this diminished fertility have been the evolution of the single (unilocular) human uterus from a primitively double form. Some biologists believe that the origin of menstruation may also be traced to this diminished fertility—at any rate, non-menstruating mammals are far more prolific than menstruating ones. In this connexion it may be mentioned, as Ballantyne and others have pointed out, that the ovaries of very prolific polyparous women, in whom twins are common, are generally of the fœtal type, especially in respect to the immense number of ovisacs they contain.

The question has often been asked whether polymastic women are more liable than others to beget more than a single child at a birth? To this it may be answered that of 70 polymastic women in Leichtenstern's list three had given birth to twins, or 4·3 per cent., whereas the average proportion of twins among British women is only about 1 per cent. In a remarkable case of hereditary polymastism recorded by Marie this anomaly was concomitant with frequent twin-births and excessive prolificacy for several generations. Viewing the matter in this light, let us seek an answer to the question, What is the greatest number of children a woman may bring forth at a single birth? As I have pointed out in my monograph on "Diseases of the Breast," there are good reasons for believing that the human *atavus* had at least seven pairs of mammæ on the ventral aspect of the trunk, of which the present normal pair alone survive. If, therefore, we may answer our query by an appeal to this indication, it would appear that as many as 14 children might possibly be brought forth at a birth. I should not care to deny offhand the absolute impossibility of such an occurrence. Among the ancients Pliny says that as many as 12 at a birth had been noted, and others even 15; but Aristotle would not admit the possibility of more than five. In comparatively modern times, however, apparently well-authenticated instances of eight at a birth, seven at a birth, and six at a birth, have been reported. Altogether, it seems desirable to keep an open mind as to the maximum possibility.

I am, Sirs, yours faithfully,

Clifton, Bristol, Feb. 10th, 1903. W. ROGER WILLIAMS.

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

To the Editors of THE LANCET.

SIRS,—If the meeting at which Professor T. Clifford Allbutt read his interesting paper on the Rise of Blood Pressure in Later Life was not very numerously attended nor his views then very fully discussed, it cannot be said that the rostrum of your columns has not since then been sufficiently and efficiently occupied by those taking an interest in the subject. The peripheral factors in the production and maintenance of increased blood pressure as life advances have been fully dealt with, although the situation and mechanism of the process have been the subject of divergent or different views for the opinions expressed differ rather than diverge. While Sir William H. Broadbent and Sir R. Douglas Powell have stood stoutly by the theory of capillary resistance Dr. Harry Campbell, sustained by the important dead-house pathology of Dr. William Russell, sees in a bespasmed arteriole the efficient cause of the ultimately persistent process—in the hypertonus of Dr. Russell the cause of the arterio-sclerosis of later life. We must all feel grateful to Professor Allbutt for having mooted a subject in the felicitous manner so peculiarly his own which has elicited so much fact and so much hypothesis. It is not because I can add much of moment to what has already been said that I venture to crave your permission to occupy the momentarily vacated tribune of your journal, but because one or two points which my own study has impressed upon me have not so far been fully brought out in the discussion. These are not contrary, I think, to the spirit of Professor Allbutt's argument. In discussing the subject of the rise of blood pressure in later life, it appears to me that the cardio-vascular changes secondary to renal disease should be excluded from consideration, except in so far as cardiac failure may induce circulatory renal disturbance, and the diagnosis of these distinct states is not a difficult matter. Excluding, then, cardio-vascular change secondary to kidney disease, we find as life advances a hyperplasia of the intima of the vessels and of the interstitial tissue of the heart, with some hypertrophy of the muscular elements in both these situations, a hypertrophy which in the case of the heart ultimately yields to the persistent peripheral obstruction, where the vessel, less active and less organised than the central organ, usually maintains its more sluggish muscular hypertrophy longer. The change may or may not, as we know, be associated with calcareous deposition. When this occurs, however, the more or less rigid vessels may have an abnormal patency and then the muscular coat, far from being hypertrophied, may, indeed, be atrophied, for it is then not over-exercised but under-exercised. Such a vessel, when the deposited lime-salt is scattered, as it usually is, may, as Sir William Broadbent remarks, be associated with a comparatively soft and compressible pulse, even in old age. The question then is, Does cardio-vascular hypertrophy precede or follow the connective tissue hyperplasia? It is unfortunate that the point cannot be determined during life, and after death both states are found in association unless atrophic muscular degeneration has supervened. That both are present in later life, when hypertonus has become persistent—when spasm, if antecedent, has passed into arterio-sclerosis—will not, I suppose, be disputed. It is only, I would suggest, by a more systematic dead-house research, with histological examination of the structures involved at all ages and in cases uncomplicated by gross organic disease, that the point can be settled. Such an investigation, so far as I am aware, has not yet been made and our argument must of needs, therefore, at present be largely hypothetical. So far as I may with diffidence express an opinion, I am inclined to believe that if muscular hypertrophy be primarily due to active and sustained hypertonus it is soon increased by having to deal with the more persistent inelasticity of connective tissue hyperplasia and that such connective tissue increase is, therefore, an active cause in heart and vessels of difficulty in propelling and conducting the circulation as life advances and provocative of the compensatory changes necessary to deal with it. This, then, is one point which I desired to emphasise. The other is, that, in my belief, the study of the peripheral physiology and pathology of the vessels has distracted attention in a measure from senile changes in the heart capable of being generated by its own activity, apart from the abnormal labour thrown upon it by peripheral obstacle—that is, that the nervous, muscular, and hæmic factors which together go to produce the functional unit of cardiac action cause changes in the organ itself, dealing as it does with the emptying of its chambers (the blood weight) and with the stress of the emotions, aggravated or not, as the case may be, by imprudences in diet and exertion. Important as the study in the living of these questions is Professor Allbutt in his reply to Sir Douglas Powell has shown that he in no wise desires to minimise the value of anatomical research, which has still much to contribute towards the elucidation of this subject. The physician cannot yet answer these questions, as Faust, also quoted by Professor Allbutt in his last letter, solved an analogous psychological problem :—

> "Still dost thou ask, why in thy breast
> The sick heart flutters ill at rest?
> Why a dull sense of suffering
> Deadens life's current at its spring?
> From living Nature thou hast fled
> To dwell 'mong fragments of the dead."

We are still doomed, I fear, to dwell long among fragments of the dead before we shall be able adequately to explain the progressive pathology of the living processes causing a rise of blood pressure in later life.

I am, Sirs, yours faithfully,

ALEXANDER MORISON.

Upper Berkeley-street, W., Feb. 13th, 1903.

To the Editors of THE LANCET.

SIRS,—I have read the correspondence on the Rise of Blood Pressure in Later Life which has already appeared in THE LANCET with much interest, and venture to ask your permission to make a few remarks with special reference to the relationship of general arterial hypertonus to the blood pressure. This relationship is undoubtedly a very complex one, and personally I am quite satisfied that when the walls of the radial artery are tightly contracted the pressure within may be either considerably increased or greatly lowered.

There is no doubt that the arteries respond very precisely to the action of toxic substances circulating in the blood and in such circumstances their calibre is diminished. This may be called *toxic* arterial contraction or hypertonus, and the condition is present in all cases of auto-intoxication, whether arising from poisons which are absorbed from the alimentary canal or due to certain chemical changes occurring in the tissues as a result of abnormal metabolism. Anyone may suffer from this kind of hypertonus and during the time that the arteriole contraction is present I believe that the blood pressure is almost invariably raised in the larger arteries. Marked diuresis for several hours is often a striking feature of this transient toxæmia, and when the toxins are eliminated the calibre of the radial artery is found to be enlarged. Dr. Harry Campbell's explanation of the greatly increased secretion of urine in such cases—that while the systemic arterioles are contracted those of the renal field are dilated—may be correct but it does not always apply. Thus in the grave anto-intoxications of pregnancy which sometimes culminate in eclampsia hypertonus is an early and persistent feature and is accompanied by a marked rise in the blood pressure. When such symptoms are present the secretion of urine is notably diminished and as hypertonus and increased pressure become more pronounced the urine may be suppressed altogether. In myxœdema and cretinism, which are typical auto-intoxications, hypertonus is always present, and the increased blood pressure in these diseases is associated with a lessened urinary secretion.

The point which I wish to emphasise, however, is that toxic hypertonus is seldom present for any length of time without some augmentation of the blood pressure, and I believe that the explanation of this is to be found in the fact that in these cases the obstruction to the flow of blood lies not only in the arterioles but also in the capillaries. Arteriole contraction alone, as it is observed in cases of *non-toxic* hypertonus, is certainly very often unaccompanied by any increase in the blood pressure, and the implication of the capillaries in the area of peripheral resistance must be regarded as a factor of primary importance when the pressure is considerably raised. It is well recognised that the capillaries are much more sensitive to the action of toxins than the arterioles.

Non-toxic hypertonus is a prominent feature in certain

diseases of the nervous system and may also be induced by severe abdominal pain, tympanites, or any form of profound shock. The tonic contraction of the arteries is often very striking and this kind of hypertonus is typically present in some cases of tuberculous meningitis during the irritative stage. Sometimes, even in young children, the radial artery feels like a piece of whipcord, and I have always found the blood pressure extremely low. When as a result of peritonitis or shock, hypertonus is present (the "wiry" pulse), the pressure is also frequently abnormally low, and remedies which produce a relaxation of the vessels lead to a raising of the blood pressure. In such cases there is a general arteriole contraction, due either to direct irritation of the vaso-motor centre (meningitis, cerebral tumour, &c.), or indirectly produced by some disturbance of the abdominal sympathetic system. There is no unusual obstruction in the capillaries. In some cases of marked arterio-sclerosis in old people, where the lumen of the radial artery was greatly diminished, I have found the blood pressure exceedingly low, but there was no reason to suppose that the capillary area was unduly obstructed. Similarly in old syphilitic vessels with nearly obliterated lumina, the pressure registered was sometimes very low.

In conclusion the following points may be stated: (1) in cases of *toxic* hypertonus the arterial pressure is, as a rule, considerably raised; and this is mainly brought about by contraction of the capillaries, which, like the arterioles, participate in the area of increased peripheral resistance; (2) in *non-toxic* hypertonus the blood pressure as registered in the radial artery commonly remains unaltered or may be greatly diminished. The obstruction to the flow of blood is then chiefly due to arteriole contraction; the capillary field is not implicated.

I am, Sirs, yours faithfully,

Edinburgh, Feb. 16th, 1903. H. OLIPHANT NICHOLSON.

THE VALUE OF CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—When travelling as surgeon of one of the Union Castle steamers I was much struck with the value of "chloretone" (a product of chloroform and acetone prepared by Parke, Davis, and Co.) in some cases of aggravated sea-sickness. Beginning with a dose of ten grains, I administered five grains at intervals of three hours until the stomach nausea and head congestion were relieved, and the patient sank into a natural and gentle sleep. In every case on waking there was a natural appetite for food and fruit, biscuit, soup, beef-tea, and stimulants were readily retained.

By the continued use of the drug in five-grain doses, at four-hour intervals, the symptoms in the worst affected were controlled for several days of very rough weather and the less affected cases were rendered quite good travellers. The most noticeable clinical feature of its action was the rapid effect produced on the pulse, converting the quick, tense beat of sea-sickness into the fuller and more regular one of health a quarter of an hour after being swallowed. The relief of headache without any heart depression whatever is a very strong point in favour of its use in persons with any organic disease of the heart or kidneys; and as a pure stimulating hypnotic without any bad after-effects it deserves a foremost place.—I am, Sirs, yours faithfully,

L. WHEELER, M.B., B.Ch. R.U.I.

Junior Conservative Club, London, Feb. 22nd, 1903.

A CASE OF HERNIA INTO THE FOSSA DUODENO-JEJUNALIS.

To the Editors of THE LANCET.

SIRS,—Mr. B. G. A. Moynihan in THE LANCET of Feb. 7th, p. 396, has thought it necessary to take notice of my record of a Case of Hernia into the Fossa Duodeno-jejunalis which appeared in THE LANCET of Jan. 24th, p. 236. This case was carefully dissected and I made drawings of the relations of the parts found. The free margin of the orifice was formed by a thick fibrous mass in which was found the left colic artery; besides this the inferior mesenteric artery, where it came off the aorta, could be said to form the lower cornu of the opening. The inferior mesenteric vein was distant to the left from this margin about half an inch. It did *not*, as Mr. Moynihan presumes, occupy the "neck" of the sac, but ran almost vertically at the above-mentioned distance. For this reason is it not probable that the case was properly named? Mr. Moynihan says that the condition of the fossa to be properly appreciated must be studied in the fœtus or young child. I have it on the authority of a most careful observer and competent embryologist (possibly the most competent in the country), whose observations will probably soon appear, that out of a series of 47 fœtuses in only one was there the slightest suspicion of a fossa of any kind in the neighbourhood of the duodenum, so that the nine fossæ so exactly described by Mr. Moynihan are probably formed later in life.

I am, Sirs, yours faithfully,

Aberdeen, Feb. 16th, 1903. C. T. ANDREW.

ANEURYSM OF THE ASCENDING AORTA.

To the Editors of THE LANCET.

SIRS,—I have read Dr. A. C. Jordan's paper in THE LANCET of Feb. 21st, p. 515, on aneurysm of the ascending aorta in a small boy with great interest. One cannot help regretting, however, that the chest was not examined during life with the x rays. True, there were no physical signs calling special attention to the chest, but I venture to think that had the chest been so examined much light might have been thrown on the case. The aneurysm, judging from Figs. 1 and 2, was quite large enough to have been so detected. The only element of doubt in the diagnosis would have been between an aneurysm and enlarged bronchial glands, the latter condition being, of course, much more likely in a child six years of age, but the continuity of the shadow with that of the heart and aorta, and more especially the pulsation of the sac, would, I think, have left no doubt about the diagnosis. I venture to think that the day will come when a patient will be examined with the x-ray screen as a matter of routine in the same way as he is now examined with the stethoscope, and I think the sooner that day comes the better. I, for my part, can only say that I have found x-ray examination of the chest in my out-patient room and in private practice of very great value.

I am, Sirs, yours faithfully,

Harley-street, W., Feb. 21st, 1903. HUGH WALSHAM.

THE CULTIVATION OF ANAEROBIC BACTERIA.

To the Editors of THE LANCET.

SIRS,—Mr. H. S. Fremlin draws attention in a note on p. 518 of THE LANCET of Feb. 21st to a method of cultivating anaerobic bacteria in plate, of which a detailed account is promised in the forthcoming report of the medical officer of the Local Government Board. Will you allow me to draw Mr. Fremlin's attention to the fact that a method based on identical principles and manipulations has already been described by myself in the report of the medical officer of the Local Government Board for 1897-98 on p. 219.

I am, Sirs, yours faithfully,

St. Bartholomew's Hospital, Feb. 21st, 1903. E. KLEIN.

APPENDICITIS IN ITS ACUTEST FORMS: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Will you kindly grant me space to correct an error and one omission in my paper upon appendicitis? The error appears in connexion with the numbers and the mortality of the cases of typhlitis and peritonitis occurring in St. Bartholomew's Hospital in the years 1882 to 1884. In all 79 cases were registered with a mortality of 23—not 41, as stated on p. 503 of THE LANCET of Feb. 21st.

The omission is the want of any reference to a note in the *British Medical Journal* of April 5th, 1892, p. 54, to which I am indebted for valuable information and through which my attention was first drawn to the work of Battey regarding the occurrence of pelvic peritonitis in the male sex.

I am, Sir, yours faithfully,

Cannes, Feb. 23rd, 1903. J. A. MACDOUGALL.

A QUESTION IN INEBRIETY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 21st, p. 552, Mr. C. E. Macnamara states his opinion that the inebriate is possessed of a strong will and asks the opinions of your readers. If

Mr. Macnamara opens "The Present Evolution of Man," p. 347, or "Alcoholism: A Study in Heredity," p. 83, he will find that if his opinion is heterodox it is certainly not new.

Mr. Macnamara seems to class "will" as an independent faculty of the mind. Is this so? Buckle, in his "History of Civilisation," vol. i., chap. i., gives good reasons for believing that it is not and for believing that the actions of men are governed by fixed laws. Herbert Spencer, as quoted by Dr. Archdall Reid, states that "the will of man is trammelled by his desires," and Dr. Reid puts the case clearly and accurately when he says: "It is a simple truth that the will of man, as of all animate creatures, is exercised, *as a rule*, to gratify, not to cross, his desires."

I am, Sirs, yours faithfully,

Everton, Liverpool, Feb. 21st, 1902. C. R. NIVEN.

THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

(*Concluded from p. 555.*)

Threat of the Swansea Friendly Societies to create a Medical Institute of their own.—Statistics as to Medical Remuneration.—Success of the Swansea Practitioners.

AT Swansea, as at Chesterfield and in many other places, the one great threat of the friendly societies is that they will amalgamate and form a medical institute or dispensary, employing exclusively for their own purposes one medical officer or more. This proposal is all the more menacing because its practicability has been demonstrated. Such institutions have already been created and exist in several towns. What little advantage can be derived from club or contract work by the local practitioners is lost when such an institution is established; on the other hand, the attendant evils are accentuated. A local practitioner who besides attending private patients is also medical officer to a friendly society can, if he is bold enough, protest against any case of flagrant abuse and he may also hope to acquire popularity and thus to increase the number of his private patients. But the managers of a medical institute import a practitioner who is a stranger to the town, they lodge him in their own house, and the agreement contains not only a clause that he must have no private patients but it is sometimes also stipulated that on leaving the institute he must not establish himself in practice in the neighbourhood. These are rules devised to make the medical officer an absolute servant and to deprive him of the slightest shred of independence. He is likely to lose the respect of the members of his profession and whatever name and standing he may have possessed. All this makes him still more dependent upon his employers and he will probably be careful to give every satisfaction to the members of the managing committee of the institute to whom he has sold his freedom and his services. But it does not follow that all the members of the friendly societies by thus enslaving their medical officer insure for themselves really efficient medical attendance. A slave may be whipped till he carries a certain load and accomplishes a certain amount of physical work. But this is not the way to develop qualities which are essential for a sound medical practitioner. The efficaciousness of medical treatment depends on the sympathy and interest which the medical attendant feels in his patient, or else the medical attendant should have a motive to spur him on in his efforts—an interest in his science if not in his patient and some possibility of progress and reward to look forward to. But these medical institutes nip all such aspirations in the bud. There is nothing to work for; there is only the dead level of a modest salary, little or no prospect of an increase, no chance whatever of distinction, no possibility of professional advancement, no hope of fortune or fame; in a word, there is no future at all. Yet it is by offering such conditions as these that the members of these friendly societies ingenuously believe that they are going to secure for themselves better medical attendance.

The friendly societies of Swansea have issued an appeal and in the lengthy circular which they have published they not only denounce the club medical officers for their neglect but they propose to form an association for the purpose of establishing a dispensary. This institution, they say, would be "entirely controlled by the friendly societies" and worked for their own benefit. There is no question here of any benefit for the medical profession; on the contrary, the only people who are to derive any advantage are the members of the friendly societies. The members, their wives, and children are all to be insured "efficient medical attendance and the best of medicines," and the duly qualified practitioners who are to do all this "will not be allowed to take on any private practice, but will devote their whole time to the service of the association." The members will buy their own drugs and establish a dispensary under the direction of their medical officer. The members are to live within three miles of this centre and to pay 8*s.* a year for themselves and their whole families. They publish a good array of statistics to prove that the results obtained by 42 similar institutions indicate that 8*s.* per member will suffice. For instance, we are told that there are 15 associations with from 1000 to 2000 adult members each, or in all a total membership of 33,700, and that they employ 22 medical officers and five dispensers. The average annual cost per member works out at 7*s.* 1·73*d.*, which is subdivided at 4*s.* 6·13*d.* for the medical officers and dispensers, 3·28*d.* for conveyances, 9·91*d.* for drugs and appliances, 7·99*d.* for house bills, 3·07*d.* for offices and committees, and 7·35*d.* for sundries. But these and other similar figures do not explain what is meant by adult membership. It is the children who give the greatest trouble. These fifteen societies, or amalgamations of societies, give the largest average sum to their medical officers. Next on the list are eight associations with from 2000 to 3000 members each that give but 3*s.* 8·84*d.*, 12 associations of from 3000 to 4000 members each that give 3*s.* 2·44*d.*, four associations of from 4000 to 5000 members each that give 3*s.* 3·92*d.*, three associations of from 5000 to 6000 members each that give 2*s.* 06*d.*, and one association of from 6000 to 7000 members which gives 2*s.* 5·78*d.* per member per annum to their medical officers and dispensers. Deducting the salary of the dispenser we find here medical men receiving less than 2*s.* per member. If we make an average of the various sums allotted to the medical officers and dispensers by these six different categories of associations, the result is a fraction under 3*s.* 3*d.* per member per annum. Dr. T. D. Griffiths has reckoned that at 4*s.* 4*d.* per annum the medical officer received about 2*s.* 6*d.* for every week's actual attendance on patients, but the above figures make it only 1*s.* 10¾*d.* per week, or 3¼*d.* per day. So here we have a total of 122,908 members of friendly societies who, according to the figures they themselves publish, are actually receiving the services of medical officers and dispensers for the munificent average remuneration of 3¼*d.* per day's attendance. The medical officer has to see the patient and to prescribe for him; the dispenser has to mix the drugs; and then, having done this, the dispenser and the medical practitioner have 3¼*d.* to share between them as the reward for their work. This is the sort of institution which it was proposed to establish in Swansea so as to render it quite certain that in future the members of the friendly societies should be properly attended when ill. They actually imagined that this arrangement would be an improvement on the present state of affairs. They did not seem to understand that a medical practitioner may see a patient for 3¼*d.* or less, or for nothing if by so doing he is acquiring experience and raising himself in his profession; but they proposed, on the contrary, conditions that would debase their medical officers and probably cause them to be ostracised by their fellow members of the profession. What class of practitioner could the members of the friendly societies expect to get under such conditions? Not men who work for the honour of their profession, but men who for some reason or other have abandoned all hope and are content to accept a fixed sum that will guarantee them against want.

The argument raised at Swansea was that the club medical officers sometimes neglected their patients; therefore the friendly societies must amalgamate and start a dispensary or medical institute of their own. To this the members of the medical profession replied that if the patients were occasionally neglected it was because a good deal of abuse prevailed and the payments made were absurdly inadequate. Thereupon some of the most active leaders of the friendly societies rejoined that in these circumstance the

best thing to do was to create a federation of societies so as to pay their medical officers even less than they had been in the habit of paying. The application to economics of the old maxim that "like cures like" did not, however, find favour so readily as was expected. Besides, though there was every prospect of paying the medical officers of the proposed dispensary less than is actually given for medical attendance, the members themselves would have to pay well-nigh the same sum. The Swansea and District Medical Practitioners' Association promptly agreed that it would try to meet the members by limiting itself to a very moderate demand. There is a sort of tacit agreement or feeling that the minimum pay for contract or club work shall be 1*d.* per week for adults and ½*d.* per week for children. There is also a very strong feeling that for the better class of artisans, who to a large extent belong to the friendly societies, the families should not be allowed to join such organisations. However, Swansea was so much behind other centres in these matters that the question of excluding families had to be set aside for the moment. It is not practicable to pass at once from the worst to the best conditions; it was therefore felt that the progress must be gradual. The average payment was said to be 6*s.* 6*d.* per annum per family, but a strong point was made of the fact that those members who had no families paid the same amount. The value of this consideration naturally depends upon the proportion of unmarried members and it was maintained that only two-thirds of the members were married. The Medical Practitioners' Association on the strength of this statement replied that its members would consent to attend the members of the friendly societies and their families for an all-round payment of 8*s.* 8*d.* per annum. This means that the married members would pay for themselves and their wives only at the rate of 1*d.* each per week. It also means that the unmarried members would pay 1*d.* per week for themselves and 1*d.* per week for the children of their married co-members. In this respect the bachelors of Swansea occupy a unique position and considering their generosity towards their married friends it is not surprising if the medical profession followed this example and also showed some indulgence towards large families. At a halfpenny per week each bachelor pays for two children and as there are twice as many married couples as there are bachelors each couple has one of their children paid for by the bachelors. All the children over and above the average of one child per couple are not paid for at all. Such are the conditions which the members of the profession declared that they were willing to accept. The Medical Practitioners' Association summarised the matter in the following terse manner:—

> Two alternatives present themselves to you—either to accept the services of the medical men now in Swansea who are prepared to attend you for 8*s.* 8*d.* or throw in your lot with the proposed medical aid association who *say* they will ask 8*s.* but can give no guarantee. Are you prepared to cut yourselves off from the services and goodwill of every medical man now practising in Swansea for the sake of a possible saving of eight pennies a year?

After some hesitation the answer was recently given. The friendly societies have abandoned their scheme of creating a medical institution for providing their members with medical aid and drugs and have accepted the terms set forth by the Swansea and District Medical Practitioners' Association. Though these conditions do not amount to the minimum of a penny per week per adult and a halfpenny per child, still they are a great improvement on the old annual average of 6*s.* 6*d.* per member, which sum included his family if he were married. But the medical practitioners have obtained another and more solid advantage. From the very beginning higher subscriptions have been claimed by the surgeons attached to particular works. It is argued that the surgery must be close to the works or factory and that such districts are not suitable for private practice. Then if the works are stopped in consequence of a strike or any other cause the medical officer has to continue to attend his patients though he gets no pay at all. Again, though he has to have his surgery near the works the workmen themselves often live at considerable distances and not all in the same direction. This causes much loss of time when they have to be seen in their own homes. Therefore the Medical Practitioners' Association declares that though it would accept 8*s.* 8*d.* from the members of the friendly societies it would require 13*s.* per annum per member from the medical aid organisations connected with the copper, tin, steel tubing, and other works. The majority have now consented to these terms, though at three large works these new conditions have not yet been conceded.

Such, then, is the present state of affairs and it will be seen that some solid advantages have been gained in a very short time. Thus once more has the use of organisation been demonstrated. The situation is still unsatisfactory in many respects and there yet remains a good deal of abuse. Tradesmen and comparatively rich men belong to the friendly societies and the need of a wage limit is felt keenly at Swansea as well as elsewhere. As at Lincoln so at Swansea, one of the principal men in the town was a member of a friendly society and paid only 4*s.* 6*d.* a year for his medical attendance. The society to which he belonged had 733 members and paid its medical officers £170 for attending them and their families. It has been calculated that at such rates of payment if the whole population of Swansea was thus enrolled the medical practice for the town would not yield more than £120 per annum to each of the practitioners established in the town; and with this £120 he would not only have to keep himself and his family but he would have to dispense and to supply drugs to all his patients, to pay rates and taxes, and to keep open a surgery for the use of his patients.

It will be seen, therefore, that a wage limit is absolutely necessary; indeed, this is more important than the question of the amount paid in subscriptions. It would be far better to attend the poor for nothing so long as those who can pay do not avoid doing so. As it is all these discussions have had another good effect. Several persons have given up subscribing to clubs and the tendency is in the case of many persons again to seek private medical advice. One local practitioner had found it to pay better to charge poor people 5*s.* a week when they were ill and nothing when well. With this system he had not had 4 per cent. of bad debts. This, again, raises the question of what should be the minimum fee in private practice, a problem which will soon have to be solved by the young society which the medical practitioners of Swansea have recently created. It is to be hoped that its future endeavours will continue to meet with the success that has rewarded its first efforts.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Spread of Small-pox.

DURING the week ending Feb. 7th 36 cases, and during that which ended on Feb. 14th 19 cases, of small-pox were removed to the Clayton Hospital. In the first week a case was overlooked that occurred in a common lodging-house. Dr. J. Niven believes that from this one 17 cases were infected, nine at the lodging-house, three at private houses, four at the workshop which the man continued to attend while ill, and also that of a publican in the neighbourhood. It is, of course, difficult to trace all those who may have been infected by patients, but this has been done as much as possible and many "contacts" have been revaccinated. In some cases, however, difficulties have arisen. The head of a private household from which three people were removed to hospital refused to allow his family to be revaccinated. These anti-vaccinationists are not merely harmless cranks or nuisances but are a serious danger to the community and it becomes a matter for consideration how best to guard against it. The principle of liberty for the subject to endanger his friends and neighbours is too sacred a fetish to be mentioned irreverently, but a little compulsion in favour of vaccination is better than small-pox. Then, too, through the shifting habits of a large section of the population many children remain unvaccinated. And it must be confessed that the medical profession is not free from responsibility for a part, at all events, of the unpopularity of vaccination. While small-pox was out of sight and therefore out of mind mothers appealed to the medical attendant to cause their infants as little suffering as possible. The medical attendant, in the tenderness of his heart and feeling perhaps some scepticism as to small-pox ever again becoming an appreciable danger, too often yielded so far as to make vaccination a very feeble protection. The statistics of the small-pox hospital showed this long ago. It may be that the suffering caused by this most loathsome disease both to patients and friends, that the loss of many lives, some of them valuable and all human, and that the expenditure of tens of thousands or hundreds of thousands of pounds in battling with a foe which ought not to, and could

not, have obtained a footing in our midst if we had been properly prepared, may lead to wiser views and more common-sense action. Against this hope, however, it must be remembered that a wise man said, "Though thou shouldest bray a fool in a mortar ..... yet will not his foolishness depart from him." Two more cases were reported to the Manchester authorities on Feb. 22nd and one on the 23rd, and two more were discovered on the 23rd in Salford. There are about 90 patients in the Clayton Hospital at present.

Bury District Small-pox Hospital.

The small-pox hospital at Ainsworth, erected by the Radcliffe, Ramsbottom, Whitefield, and Bury hospital committee, was opened yesterday. It is to accommodate 16 or 20 patients if necessary. The nurses will occupy two cottages, which have been thoroughly renovated. But what a pity it is that these hospitals have been rendered necessary by our own weakness.

Oldham War Fund.

The balance of the Oldham war fund was on Feb. 23rd at a public meeting of the subscribers disposed of as follows: £10 to the honorary secretary as a recognition of his services, £350 to the Soldiers' and Sailors' Society for the provision of a home for an aged soldier or sailor in Oldham, and £1009 8s. 11d. to the Queen's Memorial Fund for the extension of the Oldham Infirmary.

The Triple Disruption.

In accordance with general expectation Liverpool and Manchester are to have their separate and distinct universities. This decision of the committee of the Privy Council falls in with the known desires of the two cities but is opposed to the wishes of the Yorkshire College. Indeed, it is questionable if Manchester would have moved in the matter but for the irrestrainable, not perhaps unjustifiable, ambition of Liverpool. Yorkshire for the present seems to be rather left out in the cold, but if Lancashire can support two universities there is no doubt that Yorkshire is quite able to support one. But whether Yorkshire's university shall consist of the Leeds College only or shall embrace the Sheffield University College and possibly others as yet non-existent remains to be seen. There is disappointment, not unnatural, in Sheffield that the Privy Council has not associated it with Leeds now that one of the strongest objections to the admission of the Sheffield College to the Victoria University in 1897—i.e., the inadequacy of the buildings—is in a fair way of being remedied. It seems that for the completion of the scheme for new buildings the sum of £20,000 only is required and it is hoped that this sum may be raised within the city in a very short time. Possibly in the draft charter for the incorporation of a university in Yorkshire which the authorities of the Yorkshire College are to have the opportunity of submitting the claims of Sheffield may be set forth. These changes and developments will in the future have an important bearing on medical as well as on general education in the north of England. Some fear that interests may be too much localised, that wide views may become narrowed, and that three provincial universities may be in danger of setting up three varieties of provincialism. It is to be hoped that it will not be so, but, having cast off its limbs, after the fashion of some other invertebrates, it will be of interest to see what becomes of the fragmentary remains of the Victoria University.

The Owens College.

Dr. Judson S. Bury has been appointed clinical lecturer on neurology. The council of the College has received a bust, presented by Dr. D. Lloyd Roberts, of Charles White, F.R.S. (1728–1813), one of the founders of the Manchester Royal Infirmary and for nearly 40 years one of its surgeons. Dr. H. A. G. Brooke has presented to the council a bust of Lazzaro Spallanzani (1729–1799), who was professor of logic, mathematics, and Greek at Reggio, of natural history in Modena, and then in Pavia. It is a replica of one placed in honour of Spallanzani in the School of Physiology in the University of Modena. A valuable collection of calculi has been presented to the medical museum by Mr. Andrew Boutflower, senior surgeon to the Salford Royal Hospital. Mr. C. F. Myers-Ward, formerly demonstrator in physiology in the Owens College, has accepted the post of lecturer in physiology in Charing Cross Hospital, London. Dr. G. N. Stewart, F.R.S., another former demonstrator in the same department, has been appointed to the chair of physiology in the University of Chicago.

Feb. 24th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Swansea Isolation Hospital.

FOR more than 20 years the members of the Swansea corporation have been discussing the desirability of erecting an isolation hospital for the town and time after time it has appeared to be certain that such an institution would be speedily provided. During the past year plans have been prepared, a site has been secured, and a committee has reported favourably upon completing the purchase, but at the meeting of the corporation on Feb. 18th a resolution was passed by the casting vote of the mayor in favour of abandoning the proposed site. The responsibility of finding a fresh site, and that without delay, now rests with the mayor and with those who voted with him, for it is little short of a scandal that a county borough having a population approaching 100,000 should be without this most important and necessary line of defence against outbreaks of infectious disease. When small-pox was prevalent in the town last year the Swansea tradesmen were very indignant at the publicity which was given to the bare facts concerning the outbreak and were partially successful in suppressing information of the epidemic; if they really desire to attract visitors to the district they will insist upon a suitable hospital being established forthwith.

New Asylum for Breconshire and Radnorshire.

The new asylum which has been erected at Talgarth for the counties of Brecon and Radnor was formally opened on Feb. 18th by Lord Glanusk, chairman of the Breconshire county council, and the first patients will be removed from Abergavenny early in March. It is of interest to recall the history of the Monmouthshire asylum which was built at Abergavenny in 1847 for the joint use of the counties of Monmouth, Hereford, Brecon, and Radnor where there was at that time a total population of 360,000 persons. The accommodation then deemed ample was for 210 patients, about equal to one in 1500 of the population. The cost of the building was at the rate of £190 per bed. Although additions were from time to time made to the original structure the added accommodation did not keep pace with the increasing population of Monmouthshire, the population of the other counties remaining nearly stationary. In 1870, when there was a total population in the four counties of 405,000, the county of Hereford seceded from the combination and erected an asylum near the city of Hereford which with recent additions can accommodate 500 patients, a number equal to one in 240 of the population of the county. In 1890, when the three remaining counties had a population of 330,000 persons, Monmouthshire decided to dissolve the partnership with Breconshire and Radnorshire and from the present date the Abergavenny institution, where 1088 patients can be treated, will serve only the needs of Monmouthshire until a further reduction is made in the area from which patients are brought upon the completion of the asylum which the Newport corporation contemplates erecting. The Talgarth asylum buildings cover about seven acres within an estate of 286 acres. An existing house has been converted into a residence for the medical superintendent and the new buildings include six two-storey blocks surrounding an administrative block, a chapel, a laundry block, and an isolation hospital. The stone used in the construction of the buildings was quarried from the estate and bricks were made on the spot from local clay. Of the six blocks, two are for epileptics, two are for recent and acute cases, and two will be used as infirmaries. The central dining and recreation hall, which is fitted with a stage, will seat 500 persons. The present accommodation is for 350 patients, but the administrative portion is for an additional 150. The buildings are lighted with electric light and the laundry machinery is worked by electromotors. Water is obtained from the Enig brook and is conveyed to a storage reservoir with a capacity of 114,000 gallons. The roof water is conveyed into an underground tank. The sewage is disposed of on the land. The total cost of the asylum will be about £150,000, a sum equal to nearly £430 per bed on the basis of 350 beds, but the amount per bed would be very much reduced in the event of any enlargement being required. The combined population of the two counties of Brecon and Radnor at the last census was 83,000, an increase of only

4300 over the previous census and of only 2000 in the last 50 years. It is hardly likely, therefore, that any additional accommodation will be necessary for many years. Mr. W. Ernest Jones has been appointed medical superintendent and Mr. A. J. Hassard assistant superintendent of the asylum.

Bristol Medical Dramatic Club.

The twenty-sixth annual performances of the Bristol Medical Dramatic Club took place at All Saints' Hall, Clifton, on the evenings of Feb. 17th, 18th, 19th, 20th, and 21st, when the comedy of *Our Boys* was very successfully presented. The attendance was large and it is hoped that the medical charities in aid of which the performances were given will benefit considerably.

Torbay Hospital.

The fifty-ninth annual meeting of the subscribers to the Torbay Hospital was held on Feb. 19th. The medical report stated that 413 in-patients had been treated during 1902, an increase of 12 compared with the previous year. 869 minor accidents were treated in the out-patient department and 675 persons were treated as out-patients in the ophthalmic department. The financial statement showed that the year closed with an adverse balance of £400. The president (Mr. W. Kitson) in drawing attention to the need of more financial support for the hospital, alluded to the satisfactory settlement of the difference in connexion with the medical staff of the hospital, and added that the hospital was now doing more work than ever.

Feb. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Medical Association.

A MEETING of the council of this association was held in the Royal College of Surgeons on Feb. 18th with the primary object of considering the advisability of holding conferences of representatives from the county branches connected with the association for the purpose of formulating a scheme for reform in the Poor-law Medical Service affecting salaries, superannuation, vacation, &c., which would be acceptable to the medical officers throughout Ireland.

The Richmond (Dublin District) Lunatic Asylum.

At a special meeting of the corporation of Dublin the Lord Mayor, in a financial statement, called attention to the enormous increase in the rate in respect of the management and maintenance of lunatic asylums. He said that in 1893 the demand upon the rates for the Richmond Lunatic Asylum after deducting the Government grant was £14,096. For the current year the demand was £47,036, making a difference of £32,940 in the municipal rates of the city. He said that it was a very serious charge but that it was due to a large and very costly but essential increase in the buildings for lunatic asylum purposes and to the fact that there had recently been an increase in the number of lunatic patients to be provided for.

Medical Students' Guide.

The Royal College of Surgeons in Ireland has just issued a medical students' guide, giving full particulars of how to become a medical man; it commences with the preliminary entrance examinations, giving specimens of previous questions set, and the fees payable for each term. The extrance examinations will be held this year on March 23rd and Sept. 21st. The guide will be forwarded post free on written application to the Registrar, Royal College of Surgeons, Dublin.

Belfast Maternity Hospital.

At the 109th annual meeting of the supporters of this charity, which was held on Feb. 17th, it was reported that there had been during the year 312 intern patients with only one death, while 251 women had been treated at their own homes. In the extern gynæcological department 538 patients had attended. The total ordinary income was £543 0*s.* 2*d.*, while the expenditure was £701 6*s.* 2*d.*, but the proceeds of a special bazaar, together with donations, brought the institution into a proper financial state at the end of the year. The chairman announced that they were on the look-out for a suitable site for their new hospital, which they hoped would be in every respect an up-to-date one. To the vacancy caused by the resignation of Dr. Brice Smyth, Professor J. W. Byers of Queen's College has been appointed.

Ulster Medical Society.

The fifth general meeting of this society was held in the Medical Institute, Belfast, on Feb. 19th, Dr. S. Agnew (Vice-President) being in the chair. Dr. H. L. McKisack showed a patient with Spastic Paraplegia (primary lateral sclerosis). Dr. Thomas Houston showed a beautifully mounted specimen of the Head of Tænia Solium and the Body of Tænia Mediocanellata (21 feet 6 inches long), kindly lent by Sir W. Whitla. He also showed some Bronchial Casts from a case of Bronchitis under the care of Dr. J. R. Davison. Dr. J. McCaw read a paper on a case of Paroxysmal Hæmoglobinuria in a child and showed a patient. Dr. Agnew, Mr. D. Stead, and Dr. Houston took part in the discussion. Dr. J. Singleton Darling and Dr. McKisack communicated notes of a case of Pericardial Effusion and Dr. Robert Boyd, Dr. McCaw, and Dr. A. Dempsey took part in the discussion. Dr. A. L. Bell (Holywood) was elected a fellow of the society.

Queen's College, Belfast.

The students' representative council of Queen's College, Belfast, has decided to hold a dinner in "Ye Olde Castle" restaurant, Belfast, on St. Patrick's Day (March 17th) limited to present and past students of the College. Serjeant Dodd, K.C., has kindly consented to preside. It has also been arranged to hold a small fancy fair to raise money needed for the students' union. It is to be held in the McMordie Hall on March 12th, 13th, and 14th.

Feb. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Compulsory Vaccination and Revaccination.

IN February, 1902, the French Parliament passed a Bill dealing with public health and one clause of this Bill was concerned with compulsory vaccination and revaccination. It was necessary that an official notice should be issued concerning the application of the provisions of this paragraph and the notice was drawn up after consultation with the Academy of Medicine and the Consultative Committee of Hygiene. One year's grace was given before the law came into operation and the Consultative Committee was invited to draw up a scheme of regulations concerning vaccination and revaccination. This scheme was submitted to the Minister of the Interior and he in his turn referred it to the Academy of Medicine on Oct. 20th, 1902. The Academy appointed a committee of seven members to examine into the question and on Feb. 3rd, 1893, M. Kelsch submitted to the Academy the conclusions of its committee which were agreed to. The scheme of the Consultative Committee of Hygiene was eminently bureaucratic; it created a superior vaccine institute charged with the duty of certifying the purity of the vaccine employed in every authorised vaccination centre, whether such centre was official or in private hands. The Academy of Medicine, which had already organised a department of its own for gratuitous vaccination, to which it gave a great deal of trouble and care, did not appear to relish the idea of the newly created department which put it (the Academy) on the same plane as any other vaccine establishment. The Academy therefore declared that the superior vaccine institute should be the Academy itself and that the director should be a member of the Academy. Further, the Academy gave it to be understood that it would sooner close its vaccine department than accept the control of any other authority. It is by no means certain that the ideas of the Academy will prevail against the scheme of the Consultative Committee of Hygiene. The Academy leaves heads of families free to choose their own vaccinator. All the same, there are to be official vaccinators appointed who will organise gratuitous vaccination throughout the country at the expense of the local authorities (*conseils généraux*). The annual expenses are estimated at something considerable, but, as M. Kelsch pointed out, small-pox costs France from 9,000,000 to 10,000,000 francs per annum. After all, the need for these new regulations does not seem very great. Already proof of vaccination is exacted from all French persons of both sexes at every step in their career. There are vaccination centres in plenty and the Academy of Medicine is fully organised to keep up both the supply of lymph and the

supply of medical men. Vaccination is obligatory in all schools and gratuitous vaccination is well organised. The scheme of the Academy of Medicine concerning vaccination makes it obligatory within the first year of life and revaccination obligatory at the age of 11 years and again at the age of 23 years. Calf lymph alone may be used.

The Effect of Rays from Radium.

At the meeting of the Academy of Sciences held on Feb. 16th M. Roux, for M. Danys, read a paper on the Physiological Effects of the Rays given off by Radium. On the skin of a rabbit the rays produced some superficial eschars and these were followed by a marked increase in the growth of the hair. A fragment of the metal placed in the peritoneal cavity remained there for four months without causing any trouble. M. Danys also placed tubes containing radium against the spinal column in mice of varying ages. Acute nervous disturbances were at once set up and young animals died in three days. Older mice lived for eight days. The emanations from radium will not pass through adult bone, but a tube containing radium placed over a trephine hole in the skull of a dog set up hemiplegia after a few hours. The rays kill the larvæ of certain butterflies and meal worms, while they retard the development of most microbes.

Feb. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Is Tuberculosis conveyed by Food?

Professor von Hansemann, formerly an assistant to the late Professor Virchow and now prosector to the Friedrichshain Hospital, recently read a paper before the Berlin Medical Society on the question of the transmission of tuberculosis by food and especially by milk. The announcement of a paper on this subject, which has received so much attention since the famous speech delivered by Professor Koch before the British Congress on Tuberculosis in London, attracted a large audience. Professor von Hansemann stated that according to Professor Koch's opinion expressed at London *perlsucht* (bovine tuberculosis) was not communicable to the human subject, neither was human tuberculosis communicable to cattle. In his address read before the recent conference on tuberculosis at Berlin Professor Koch had dealt only with the question of the transmission of *perlsucht* to the human subject, not making any reference to the transmission of human tuberculosis to cattle. Alluding to Professor Wolff, Professor von Hansemann said that some trustworthy observers had succeeded in making cattle tuberculous by the inoculation of the virus of human tuberculosis, the obvious inference being that the patient had either suffered from *perlsucht* or that both diseases were identical. One of the principal arguments used by Professor Koch was that a collective investigation of cases, or alleged cases, of intestinal tuberculosis produced by food gave an absolutely negative result. It must, however, be remembered that Professor Koch only took cognisance of cases in which every other mode of infection could be excluded, a condition very difficult to satisfy. Another of his arguments was that if the virus of tuberculosis were conveyable by milk or meat there would necessarily be epidemics of intestinal tuberculosis just as there were epidemics of enteric fever. It was, however, unreasonable to compare an acute infection like enteric fever with a chronic disease which depended on so many casual circumstances. The frequency of primary intestinal tuberculosis varied considerably in the estimates published by different authors. According to Dr. Heller cases of primary intestinal tuberculosis were in the proportion of 3·78 per cent. of all cases, while according to Professor Baginsky they were in the proportion of 4·1 per cent. The late Professor Virchow had stated that he had observed only three or four cases annually. Professor von Hansemann's figures were practically identical with this, for he had seen 25 cases in seven years. He said that the cases must be classified in four different groups: (1) those in which only intestinal tuberculosis was present, neither the glands nor any other organ being affected; (2) those in which not only the intestine but also the mesenteric glands and the peritoneum were affected with tuberculosis; (3) those in which organs were affected which were never the seat of primary tuberculosis—such, for instance, as the pericardium and the meninges of the central nervous system; and (4) those in which tuberculosis was present in the lungs and the glands also but the lesions of these organs were obviously of a more recent date than those of the intestines where the ulcers had even partially healed. In no instance had tuberculosis of the lungs appeared as a sequel of intestinal tuberculosis. Tuberculosis of the peritoneum was sometimes observed in cases where the intestinal canal was healthy and it was therefore probable that tubercle bacilli were capable of passing through the intact mucosa of the intestine. Professor von Hansemann then called attention to the fact that intestinal tuberculosis might be produced in other ways than through the medium of the food, as, for instance, by the swallowing of the sputum by tuberculous patients. This was especially apt to happen with children, but, nevertheless, 40 children suffering from pulmonary consumption who were examined tuberculous ulcers of the intestines were found in only 10. It had been said by Professor Koch that butchers who dress the carcasses of tuberculous cattle are not liable to contract cutaneous tuberculosis on their hands or fingers, and this fact has been used as an argument against the possibility of *perlsucht* being communicated to the human subject, but it must at the same time be remembered that pathologists and those who work in dissecting rooms in various capacities very seldom suffer from tuberculosis of the skin, although examples of human tuberculosis are frequently passing through their hands. An investigation made by Professor von Hansemann showed that among 250 such persons who were examined, there were only four sufferers from tuberculosis of the skin and in no instance did general tuberculosis ensue. The skin was, therefore, not very liable to become infected with tuberculosis. Professor von Hansemann concluded his remarks by saying that tuberculosis might possibly be conveyed by food, but that such an event was extremely rare and that pulmonary tuberculosis was never a sequel of primary intestinal tuberculosis.

Incomes of the Medical Profession.

The treasurer of the Berlin medical chamber has recently published a statement relative to the incomes of the profession in the district over which the chamber has authority. As already mentioned in THE LANCET of Jan. 5th, 1901, p. 70, medical men are required by law to pay a certain sum to the medical chamber of their district for the support of distressed medical men and their families. The Berlin chamber decided two years ago that every medical man should pay a uniform sum of 10 marks (10*s.*) and that those earning more than 5000 marks per annum should pay an additional amount equivalent to 5 per cent. of their income tax. In order that a fair assessment may be arrived at the Government tax office supplies the treasurer of the medical chamber with information relative to the incomes of the medical men concerned. The statement now published shows that while the number of medical men in Berlin and the province of Brandenburg has risen from 3458 in 1901 to 3609 in 1902, an increase of 4·3 per cent., their income tax has increased in the same period from 774,470 marks to 832,393 marks, an increase of 7·4 per cent. The aggregate income of the profession in this district has therefore risen, although not to any considerable extent. A small proportion—namely, 4 per cent.—of the profession had no taxable income at all; 26·9 per cent. had incomes between 900 and 3000 marks; 17·3 per cent. had incomes between 3000 and 5000 marks; 27·8 per cent. had incomes between 5000 and 10,500 marks; 17·8 per cent. had incomes between 10,500 and 50,000 marks; and 1·4 per cent. had incomes from 50,000 to 220,000 marks. In the remaining cases which made up the balance of 4·8 per cent. some points were still held under consideration by the tax office authorities. The statement then compares the incomes of the medical profession with those of the barristers who are in like manner taxed by their chamber. The numerical results of the comparison are as follows: 10 per cent. of the barristers and 30·9 per cent. of the medical men have incomes under 3000 marks; 12 per cent. of the barristers and 17·3 per cent. of the medical men have incomes from 3000 to 5000 marks; 50 per cent. of the barristers and 27·8 per cent. of the medical men have incomes from 5000 to 10,000 marks; 12 per cent. of the barristers and 7·5 per cent. of the medical men have incomes from 10,000 to 15,000 marks; 8 per cent. of the barristers and 4·7 per cent. of the medical men have incomes from 15,000 to 20,000 marks; while 8 per cent. of the barristers and 7 per cent. of the medical men have incomes exceeding 20,000 marks. The average income is therefore higher in

the legal than in the medical profession, and it must, moreover, be remembered that the medical chamber taxes a medical man's total income, both his professional earnings and his receipts from other sources, such as property yielding an annual return, whereas members of the legal profession pay dues to their chamber on their professional earnings exclusively. Dr. Langerhans, a Berlin medical man and a member of the Prussian Diet, has united with other members in proposing that the Diet should alter the law so that (1) the medical chamber shall tax only the professional earnings of medical men and not their total income; and (2) that the tax shall be uniform. This proposal, however, does not meet with general approval. It is said, for instance, that the Berlin medical chamber is now able to spend 50,000 marks annually out of its fund for the support of distressed members and it is obvious that if professional incomes only were taxed the only alternatives would be either a great reduction in the fund or a great increase in the rate of assessment. Moreover, it would be inequitable to tax the income of a hard-working practitioner whilst another medical man who was in comfortable circumstances and did not practise was not required to pay anything.

Feb. 23rd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Report on Malaria at Ismailia.

LAST September Major Ronald Ross, I.M.S. (retired), was invited by the President of the Suez Canal Committee to visit Ismailia and to advise on what steps should be taken to rid the town of malaria and readers of THE LANCET already know that in this mission he was voluntarily accompanied by Sir William MacGregor. On arrival they found that Dr. Dampeirou and Dr. Pressat, the medical officers of the company, had already discovered many anopheletes in houses infected by malaria. The population of the town amounts to only 7000 people, of whom at least 1000 are employed by the canal company. The anopheletes found at Ismailia belonged chiefly to the two varieties, anopheles Pharoensis and anopheles Chandoyei. With the exception of one fountain in the middle of the European part of the town the ordinary irrigation supply of Ismailia was found to be free from anopheles; also the cesspools contained no anopheletes, though they swarmed with innumerable larvæ of the culex variety. Several large marshes to the east of the town were filled up years ago in an effort to fight malaria, patients who had suffered from fever were regularly treated with quinine, and all the employés of the company were well provided with mosquito nets, but Major Ross points out that the chief reason why these measures alone have not been successful is that the small ponds and pools have been neglected in times past. In these he found large quantities of anopheletes and he advised the authorities to fill up all those pools that exist and to put fish in the larger ones which cannot yet be filled in. He thinks that this is a better method than dosing everyone indiscriminately with quinine, or than leaving the natives callously to their fate, and specially than by attempting to protect Europeans by mosquito-proof houses. He advises that as far as possible the public should be educated on the mosquito question by public meetings, pamphlets, &c., and that not only the anopheles but also the culex should be summarily destroyed, and he reminded the company that the culex pipiens and the stegomyia fasciata, both found in large numbers in cesspools, are capable of propagating elephantiasis and yellow fever. He advises that special men should be told off to pour petroleum oil into every cesspool once a week, and judging from past experience, he promises that Ismailia, with an insignificant rainfall, can be rid of mosquitoes more easily than many other towns. He ends his report by recommending, at the desire of several of the inhabitants, that the town should be supplied with filtered water. It is satisfactory to know that the work of destroying the mosquito is now being energetically pursued at Port Said, Ismailia, and Suez, but so far the Government cannot be persuaded to do anything in this direction in Cairo.

The Medical Congress at Cairo: Malaria in Egypt.

I think it will be well, although the medical congress is now a thing of the past, to say a few words about the discussions which took place upon malaria. Major Ross sent a paper on Malaria to the medical section, as he was unfortunately unable to attend in person. He pointed out the very great advance in the hygiene of warm countries which has taken place since the last medical congress held in the tropics, which was that of Calcutta in 1895. He believes the most important question now is to decide whether the gnats which do not belong to the genus anopheles are or are not concerned in the propagation of malaria and why certain individuals of one species of gnat are more dangerous than others. For instance, the researches of Stephens and Christophers demonstrate that the anopheles Rossii may be almost exculpated as an agent of malaria. His own personal experience of three years' constant attention to the subject in countries so different as water-logged Assam and Lagos on the one hand and arid Ismailia on the other has led him to believe that the best personal prophylaxis is the ordinary mosquito net during sleep and to this he adds the prophylactic administration of quinine when the danger is specially great. As mosquitoes seldom bite in the open air it seems an unnecessary policy to attempt to avoid them there, but he praises very highly the use of the punkah or the electric fan, together with the wholesale removal of breeding-places of all kinds of mosquitoes. He ended his paper by desiring the medical profession constantly to urge, and if necessary to force, the public towards more general efforts against malaria. Dr. Montaldo (Spanish Royal navy) also sent a paper based on his experience of malaria in the island of Fernando Po. He is not at all converted to the mosquito theory but advises the use of the mosquito net to avoid the discomfort of insect bites. He believes chiefly in general hygiene and in the prophylactic use of valerianate or hydrochlorate of quinine, which he recommends in doses of from four to eight grains taken fasting or before bedtime. As a prophylactic he finds that a wafer of four grains taken every second morning is sufficient. Professor Mariani (Genoa) devoted a long speech to the praise of the Italians who have done so much in the elucidation of the malaria problem and he complained that Professor Koch and others had not given them sufficient acknowledgment. He cited a case where during Professor Koch's visit to Rome two years ago Professor Baccelli saved the life of a man moribund from pernicious fever by an intravenous injection of quinine. Professor G. Gaglio recommended very highly the hypodermic injection of quinine, which he gives with urethane in the proportion of 2 of hydrochlorate of quinine to 1 of the latter. Yellow fever is not a disease which attacks Egypt and the only mention of it in history is by Baron Larrey during the French occupation 100 years ago, whose cases were almost certainly either relapsing fever or Griesinger's bilious typhoid fever. Major Gorgas (United States Army Medical Corps) contributed an interesting paper on the Sanitation of Yellow Fever in Cuba. He pointed out that in times past there have been several instances of large bodies of men being almost entirely destroyed by this disease; the French expedition in 1802 to Haiti lost 22,000 out of 25,000 men from yellow fever in one season. Again, quarantine in the last generation has caused great financial loss; for instance, it is estimated that the loss to the Mississippi valley by the last great epidemic of 1878 was not less than £20,000,000. In 1898 when the Americans took possession of Havana they found that the death-rate was 91 per 1000, but in consequence of improved sanitary conditions the mortality fell in 1899 to 33, in 1900 to 24, and in 1901 to 22·11, but to their great disappointment all their sanitary efforts had no effect on yellow fever which, on the contrary, grew worse and worse, the year 1900 being one of the severest epidemic seasons, even for Havana, which had been recorded for the past 140 years. A special board was appointed to study the disease, and this board discovered the truth of Dr. Finlay's (Havana) contention that a certain species of mosquito was the means of transmitting the disease from person to person. After many experiments it was found that a stegomyia which was allowed to bite a yellow fever patient within the first three days of the disease, kept for from 12 to 20 days, and then allowed to bite a non-immune individual, almost invariably transmitted the fever. The period of incubation was proved to be from three to six days, the shortest time being two days and 22 hours and the longest six days and two hours. When once it was proved that the stegomyia was the real cause of the disease the following

arrangements were carried out:—1. The quarters of the patient were screened with wire netting within two hours after the case was reported and a guard was placed over the quarters to see that the one wire door was kept closed, immune persons only being allowed freely to pass. 2. Arrangements were made to kill all mosquitoes which might have become infected before the screening of the patient, both in his own house and in all the neighbouring houses. For this pyrethrum was burned in the room at the rate of 1 pound to 1000 cubic feet of space, after which the mosquitoes were carefully swept up and destroyed. 3. Five days' quarantine was maintained to keep out of the town people who might be suffering from yellow fever or incubating for it. 4. Brigades were organised for the destruction of mosquito larvæ in all parts of the city and suburbs. In January, 1901, just before the mosquito brigades were organised, an inspection of the whole city showed that mosquito larvæ existed in 26,000 different places in the city. A year later a similar inspection showed less than 300 deposits of larvæ in the same area. The destruction of the mosquito also reduced the malaria mortality in 1900 from 344 to 151 in 1901. The fight against yellow fever was begun in February, 1901, and on Sept. 28th of the same year the last case of yellow fever occurred in Havana. Since that time, now more than a year ago, not a single case had originated in the city, this being the first time that the disease had been absent from Havana for all the years that statistics have been taken. The Medical Congress passed a vote of condolence with the family of the late Major Walter Reed who, as readers of THE LANCET are aware, died quite lately in Washington after an operation for appendicitis. He was one of the foremost bacteriologists and pathologists of the United States and he acted as president of the board of army medical officers in Havana who taught the world how to eradicate yellow fever. Dr. Terni (Messina) also contributed a paper on Yellow Fever which he had studied in Brazil and expressed the belief that the "*bacille icteroide*" is the specific cause of that disease.

Cairo, Feb. 17th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Hospital for the Treatment of Tuberculosis in New York City.

IT is computed that there are in New York 19,000 persons suffering from tuberculosis. The facilities for taking care of consumptives are very inadequate; in fact, it has been shown that New York is far behind London and most of the other large cities in regard to provision for the care of sufferers from pulmonary tuberculosis. The matter has been taken up recently by the lay and medical journals and by the medical profession. The *New York Herald* has advocated editorially the establishment of hospitals and sanatoriums for indigent consumptives. On the evening of Jan. 3rd Dr. Henry P. Loomis spoke in favour of this course. He drew attention to the fact that New York city was actually worse off now than it was ten years ago in the matter of taking care of consumptives, for since tuberculosis has been regarded as a communicable disease its victims have been barred from the general wards of the city hospitals. The majority of the cases are in the tenement districts where the danger of infecting healthy people is very great on account of the overcrowding and the ignorance of this class. Dr. Loomis therefore thinks that now is the time for the city government to take practical steps, as has already been done in most of the large cities abroad, to establish a large and thoroughly equipped consumption hospital; he is further of opinion that such a building should be erected on Blackwell's Island where there is plenty of room and where the patients can have the maximum amount of sunlight and air. In connexion with this main consumption hospital an annexe should be built in the country near New York. This annexe should be constructed on the pavilion plan and should be intended for those hopeful cases where the sufferers are in the early stages of the disease. Great interest is being taken in the question of tuberculosis by rich men in this country. Mr. Phipps the other day gave more than £200,000 to Philadelphia for the purpose of studying and treating the malady, while Mr. Rockefeller has given to the University of Chicago a much larger sum to be devoted to research work especially in tuberculosis. It thus seems probable that New York will soon have the necessary institutions for its consumptive poor.

Adulteration of Drugs in New York City.

The practice of substituting inferior or impure drugs for those ordered has been exercising the minds of New York physicians for some time. So common has this practice on the part of druggists become that recently many physicians, as well as local medical societies and associations, submitted a large number of samples of different drugs and chemical agents to the department of public health with the request that they should be analysed. Phenacetine is the particular drug which at present is looked upon with suspicion, and out of a total of 373 specimens purchased from druggists in Greater New York no less than 365 have been found to be adulterated. Many other drugs have been discovered to be not up to the standard of the requirements of the United States Pharmacopœia and the health board intends to pursue its investigations on a large scale.

Charges against Bellevue Hospital.

Once again grave charges, reflecting seriously upon the management of Bellevue Hospital, the large city hospital of New York, have been made. Some two or three years ago the scandals originated by accounts of cruelty which occurred in Bellevue Hospital became so notorious that public opinion was much agitated and finally a board of trustees investigated the matter and made a report. The report stated that many evils existed in the system of management, and that the nursing especially was faulty. The board of trustees presented a scheme for reorganisation and among other suggestions the recommendation was made that all the old buildings known as the Bellevue Hospital should be pulled down and that a thoroughly equipped modern hospital should be erected on their site. Similar recommendations were made with regard to the other city hospitals. Despite these recommendations it would appear that few measures of reform have been introduced, for the charges which have been recently brought against the management are in the main identical with those preferred many times previously. A searching investigation is now being undertaken by the district attorney's office. The *Medical Record* and other New York medical journals insist strongly that the present system of management should be altered and that hospitals in keeping with the size and wealth of New York should be provided by the city.

Feb. 16th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Tuberculosis in Victoria.

A DEPUTATION from the Victoria Association for the Prevention and Cure of Tuberculosis recently waited on the Minister of Health and appealed for a Government grant for the care of practically incurable cases of tuberculosis. The Austin Hospital was prepared to make provision for the cure and treatment of 60 additional consumptives if the Government would bear half the cost. Dr. J. Jamieson, health officer of the city of Melbourne, stated that between 1800 and 1900 persons died in Victoria every year from tuberculous disease and that there were at least from 5000 to 6000 sufferers from tuberculosis in the State. Of these probably 1500 might be regarded as being in a tolerably curable stage. The only accommodation provided was at the Macedon and Echuca sanatoriums for 50 cases. The only provision for the remaining incurable cases was at the Austin Hospital, to the extent of 80 cases a year, and the Melbourne Hospital, where 150 cases a year were treated. The Minister of Health admitted that a very good case had been made out by the deputation and said that he would place its views sympathetically before the Cabinet, but in the present state of the finances he could not promise that the Government would do anything. He suggested that the money should be raised by public subscription.

The Financial Position of the Medical Charities in Victoria.

The Government of Victoria in pursuit of its retrenchment policy has reduced the charities grant by £20,000. Owing to the drought the prices of provisions, and, in fact, of everything, are exceptionally high. Consequently the managers of the various hospitals are in a very serious financial difficulty. Their expenditure is increased and their income is diminished. A deputation of representatives of the various hospitals recently met the Treasurer to the Government to discuss the position. The deputation asked that effect might

be given to the recommendations of the Charities Commission. If some assistance was not forthcoming the various institutions must close some of the wards. The Minister, in reply, said that the old-age pensions must have relieved the demands on organised charities or private individuals by more than £20,000. He thought also that the charities were abused; by want of closer discipline the benefits of charity had been given to many who, personally or through relatives, might have paid. The inspector of charities in his last report said: "The number of really destitute cases was comparatively small; the hospitals are used by persons not able to pay the ordinary medical fee, yet able to make a small contribution to the institution." Taking the Melbourne Hospital as an illustration only £60 were contributed in sums under £1. The people who could give small amounts were those who received the benefits of the charity. The charitable institutions altogether obtained from private subscriptions, entertainments, and collections £65,000; from municipal grants, £11,000; as interest on investments, £11,000; from patients' contributions, £16,000; from out-patients' fees, £5000; from legacies, £15,000; and from the Government, £110,000. He regretted that he could not see his way to give more aid from the Government. Speaking as an individual and not as the Treasurer of the State, he would like the charities to have an endowment by a tax on sports and the totalisator. It has been pointed out, however that the managers of the charitable institutions can do nothing more; the suggestions of the Treasurer could only be carried out by Parliament. Economy has been carried to its extreme limits. The debit balance at the Melbourne Hospital for the year is now £6793. The Queen Victoria Jubilee Fever Hospital is no nearer a solution of its difficulties. A conference of municipalities in the metropolitan area has been held. A basis for discussion was presented, providing (1) that half of the cost of maintenance should be provided by the metropolitan municipal councils and half by the Government; and (2) that all the metropolitan municipalities should contribute in proportion to municipal property assessment. Unfortunately the Premier stated that the Government would not provide half the money required and so far only eight out of 24 municipalities concerned have approved of the scheme, while seven actively disapprove.

New Out-patient Department at the Sydney Hospital for Sick Children.

A new out-patient department has just been opened in connexion with the Sydney Hospital for Sick Children. It is situated at the corner of Quay-street and Valentine-lane. It is close to the new central railway station and the George-street trams. The site has been obtained on a 50 years' lease and the estimated cost of the buildings is £3000. There are a large waiting hall to seat 200 persons, with provision for future extension; an examination-room at the entrance, with a special room for suspect cases, and four consulting-rooms; an adequately fitted operating theatre; a large dispensary and attached waiting hall; and house surgeons' and nurses' quarters. Special arrangements are made for a constant circuit of patients.

Prince Alfred Hospital, Sydney.

The enlargement of the Prince Alfred Hospital, Sydney, from 161 to 236 beds has necessitated changes in the staff. To relieve the medical superintendent of much of the work of directing the non-medical staff it has been decided to extend the functions of the secretary by making him the chief non-medical officer under the medical superintendent. Revision of the rules was also necessitated by the creation of the new positions of resident pathologist, registrar, and anæsthetist, clinical assistants to the out-patient department, and honorary pathologist. The matron will in future be known as the matron and superintendent of nursing; the trained staff will consist of sisters, charge nurses, and staff nurses, and the pupil nurses will be graded as first, second, and third year pupil nurses. Two new senior positions have been created in the matron's assistant and the housekeeper, both of which will be generally filled by sisters, the sister acting as housekeeper being changed every six months so that all may receive adequate instruction in this branch of hospital management. The directors have also had under consideration the question of lightening the nurses' duties, particularly during their first year of service. It is held that a certain amount of manual labour, such as scrubbing woodwork, &c., is essential as a test of the physical capacity of candidates for the nursing profession to stand the strain which they must undoubtedly undergo. But it has been decided that, except during a short probationary trial, they may be relieved of much of this work and to permit of this being done wardmaids are for the future to be employed. These will do the rough works of wards, thus leaving the nurses free to carry out their more distinctive duties. As the work of the nurses will thus be lightened to a great extent it is anticipated that the demand for positions upon the nursing staff will be even greater than at present. To meet this condition of things it is proposed to raise the status of the nurses by making the position more of an honorary one than at present and by giving an honorarium instead of a salary, which will rise by annual increments over a term of three years.

University Dental Hospital, Sydney.

The Senate of the University of Sydney has received a report from Mr. R. Fairfax Reading, chairman of the University Dental School committee, upon the work of the University Dental Hospital for the year 1902. The hospital was opened to the public on Jan. 7th and even without making allowances for delays and interruptions, due to vacations and the University jubilee celebrations, the record of the work was, the report states, highly satisfactory. The total number of patients who had attended at the hospital for treatment in all departments was 3964—a convincing proof of the wisdom of the action of the Senate in establishing the hospital. The committee had taken every precaution to prevent the hospital being abused by those who could well afford to go to a dentist and thereby to assure to the deserving poor the full enjoyment of its benefits. The committee considered that the amount of clinical work done by the second-year students, who only number nine, reflected great credit upon the students. In March next 11 students at present in their first year would be ready to undertake clinical work and it would then be necessary to provide at least six more dental chairs in addition to the 11 with which the hospital is now supplied. "The increasing amount and variety of conservative dental work which the students are called upon to undertake," the report concludes, "renders the hospital an important addition to the dental school and will in future be a guarantee that the dental graduates of the University of Sydney will be thoroughly competent to successfully undertake any operation incidental to modern conservative dental surgery."

Preservatives in Food.

The Board of Health of New South Wales has published amended regulations under the provisions of the Public Health Act, one of the most important of which is as follows:—

(a) Any one antiseptic or any one antiseptic preparation may be mixed with any food in proportions not exceeding one one-thousandth of one grain per pint in the case of liquid foods, and of one one-thousandth of one grain per pound in the case of solid foods; provided that the label required by section 26, subsection 2, of the Act to be affixed to the vessel or parcel containing food mixed with antiseptics or with antiseptic preparations in accordance with this regulation, be in the form given in Schedule L and be printed on a white ground in black capital letters of the size known as "two-line brevier sans serif," and contains no other matter. (b) The following substances shall be deemed to be antiseptics and antiseptic preparations for the purposes of this regulation: Formaldehyde and its preparations, boric acid and its preparations, hydrofluoric acid and its preparations, sulphurous acid and its preparations, benzoic acid and its preparations, salicylic acid and its preparations, and derivatives of coal tar, whether direct or indirect.

The regulation will come into force on Feb. 2nd.

Jan. 14th.

Obituary.

EDWARD EUSTACE, M.D. DURH., L.R.C.P. EDIN., L.R.C.S. IREL.,

SURGEON-LIEUTENANT-COLONEL, A.M.D.

DR. EDWARD EUSTACE died at his residence, Underwood, Cheltenham, on Feb. 16th, in his sixty-second year. The deceased obtained the qualifications of L.R.C.S. Irel. and L.R.C.P. Edin. in 1863 and 1864 respectively and graduated M.D. of Durham University in 1886. Shortly after qualifying he entered the Army Medical Department and whilst in the service was in charge of the Women and Children's Hospital at Netley in 1873-74, the European and Native Female Hospitals at Agra in 1881, and the Women's

Hospital, Landour, in 1882, and he was also medical superintendent of the Military Hospital, Devonport, in 1884. Shortly after receiving his promotion to surgeon-major he retired from the service with the honorary rank of surgeon-lieutenant-colonel. He then commenced practice at Weston-super-Mare and married the daughter of General Rawlins of that town. After remaining for several years in Weston-super-Mare Dr. Eustace removed to Cheltenham and practised there. The deceased was extremely popular in Weston-super-Mare and in Cheltenham and much sympathy is felt for his widow and her young children.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in February the following candidates passed in the subjects indicated:—

Surgery.—E. F. Beaumont (Section I.), Middlesex Hospital; E. M. Beverly (Sections I. and II.), Royal Free Hospital; C. A. Campbell, (Sections I. and II.), Trinity University, Toronto; O. Gutermann, Berlin and Rostock; J. P. Nettell (Section II.), London Hospital; S. Riley (Section I.), Manchester; and H. P. Shanks, St. Bartholomew's Hospital.

Medicine.—E. M. Beverly (Sections I. and II.), Royal Free Hospital; A. E. Bird (Section II.), Manchester; C. A. Campbell (Sections I. and II.), Trinity University, Toronto; G. M. Crockett (Section II.), Royal Free Hospital; G. J. Humphreys (Sections I. and II.), St. Bartholomew's Hospital; P. J. Pagonis, Athens; and L. S. Shoosmith (Sections I. and II.), St. Mary's Hospital.

Forensic Medicine.—E. M. Beverly, Royal Free Hospital; C. A. Campbell, Trinity University, Toronto; G. A. Crowe, London and Westminster Hospitals; T. S. Davies, St. George's Hospital; and G. J. Humphreys, St. Bartholomew's Hospital.

Midwifery.—K. M. Betts and E. M. Beverly, Royal Free Hospital; W. H. Bush, Guy's Hospital; C. A. Campbell, Trinity University, Toronto; A. D. Edwards, Cardiff and London Hospital; N. S. Finzi, University College Hospital; A. B. Gosse, Royal Free Hospital; and J. M. Wall, St. Thomas's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—E. M. Beverly, C. A. Campbell, G. M. Crockett, T. S. Davies, O. Gutermann, G. J. Humphreys, and J. P. Nettell.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following candidates, having passed the necessary examination, have been admitted Fellows of the College:—

C. R. Boyce, Enniscorthy; J. M. M. Crawford, Royal Army Medical Corps; A. Harris, Assam, India; J. M. Keegan, Cape Colony; R. McCombe, Cambridge; and Miss A. M. Thornett, London.

The following candidates passed the primary part of the examination:—

E. Sheridan and R. F. C. Talbott.

TRINITY COLLEGE, DUBLIN.—At examinations held recently the following candidates were successful:—

Final Examination in Medicine.—Seaton S. Pringle, John M. Holmes, Thomas L. Sands, Thompson F. Wilson, James M'Cutcheon, Alexander R. Marks, and William P. Ringland.

Section B.—Henry R. Nelson, William M. Wade, Alexander L. Otway, John F. W. Leech, Harry O'H. H. May, Winslow S. S. Berry, Reginald W. T. Clampett, Richard C. Hallowes, Robert Bailey, Rev. Richard B. Bryan, and Samuel H. Vickery.

Final Examination in Midwifery.—Robert J. Fleming, William G. Harvey, William R. P. M'Neight, Charles E. Moore, Joseph Wallace, and Douglas B. Thomson.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE-ROAD, N.W.—The annual meeting of subscribers of Queen Charlotte's Hospital was held at the hospital on the afternoon of Feb. 23rd, the Earl of Hardwicke presiding. The report stated that 1271 women had been treated in the hospital during the past year and 1204 had been attended at their own homes. The expenditure had amounted to £5183. King Edward's Hospital Fund had made a grant of £1000 to the hospital and £50 to the convalescent home. In moving the adoption of the report Lord Hardwicke referred to the continued increase in the work of the charity and its importance as a training school in midwifery and monthly nursing. The new regulations extending the period of training for midwives and nurses had been in force for a year and had proved very successful. He also referred to the passing of the Midwives Act and to the leading part that the hospital had always taken in the training of midwives. To maintain the hospital in efficiency upwards of £5000 was needed yearly, but the assured income amounted to only about £2000. He made an earnest appeal for further funds—especially new annual subscriptions—to provide the deficiency.

FREEMASONRY.—*The Middlesex Hospital Lodge, No. 2843.*—A meeting of this Lodge was held at the Freemasons' Hall on Thursday, Feb. 19th, Bro. William Duncan, W.M., in the chair. Bro. Percy Noble was admitted to the third degree. Messrs. J. Eisdale Molson, Sidney Herbert Lee, and Walter James Susmann were initiated into Freemasonry. Bro. F. J. Wethered was elected W.M. for the ensuing year and Bro. Henry Morris was re-elected treasurer. The brethren and visitors subsequently dined together.

OBSTETRICAL SOCIETY OF LONDON.—The following is a list of officers of this society for 1903:—President: Dr. Edward Malins. Vice-Presidents: Dr. William Japp Sinclair, Dr. A. H. Freeland Barbour, Dr. John Phillips, and Dr. Herbert R. Spencer. Treasurer: Dr. George Ernest Herman. Chairman of the Board for the Examination of Midwives: Dr. W. R. Dakin. Honorary secretaries: Dr. Amand Routh and Dr. Montagu Handfield-Jones. Honorary librarian: Dr. Robert Boxall.

THE JOHNSTON LABORATORY, UNIVERSITY COLLEGE, LIVERPOOL.—Mr. Long, President of the Local Government Board, will open the Johnston Laboratory at University College, Liverpool, on May 9th. This laboratory, which has been built and equipped by Mr. William Johnston of Bromborough, will include accommodation for the following departments of the college: bio-chemistry, under the direction of Professor Benjamin Moore, D.Sc.; tropical medicine, under Major Ronald Ross, C.B., F.R.S.; experimental medicine and comparative pathology, together with cancer research, under Dr. A. S. F. Grünbaum. Mr. Johnston has endowed the professorship of bio-chemistry and three fellowships in various branches of medical research, while, as we have already mentioned, the scheme for the investigation of cancer has been recently provided for by Mr. T. Sutton Timmis with a gift of £10,000.

UNIVERSITY COLLEGE HOSPITAL.—In January, 1882, Mr. Newton H. Nixon, the secretary, published a history of University College Hospital from its foundation to the year 1881 and he has now supplemented that volume by a pamphlet containing a "Record of Events from 1882 to 1901 inclusive." This is not a continuous narrative but consists of detached paragraphs alphabetically arranged. For instance, under letter B the entries are "Balls, Bazaars, Beck Memorial, Beds named, Beds closed, Beds, re-opening of," and so on through the alphabet, concluding with "Students' distinctions, University College Hospital Ladies' Association, Wakley Convalescent Home, Wards named." The most important event in the recent history of the institution is chronicled under the heading "Rebuilding of Hospital," the prime mover in which work is Sir J. Blundell Maple, Bart., M.P. The new buildings were commenced in September, 1897, the foundation-stone was laid by the then Prince and Princess of Wales in June, 1898, and various departments were opened at different times in 1900 and 1901. As the "Record" is only brought up to the end of 1901 the great progress made during 1902 is not referred to. The account of the Wakley Convalescent Home mentions the bequest of a freehold residence and land at Longcross, near Chertsey, by Dr. James G. Wakley, Editor of THE LANCET, in 1886 and the subsequent negotiations by which, with the consent of the Charity Commissioners, the property was sold and the Wakley Convalescent Fund was created.

DONATIONS AND BEQUESTS.—Under the will of the late Sir Joseph Sebag-Montefiore the London Hospital, the Ramsgate Seamen's Infirmary and General Hospital, the Beth Holim Hospital, Mile End-road, and the Jews' Hospital and Orphan Asylum, Lower Norwood, receive £100 each.—One-eighth of the estate of the late Mrs. A. M. Travers, which has been valued at £1916, has been left in trust for the Royal Hospital for Incurables at Donnybrook, Dublin.—A legacy of £500 has been bequeathed to Addenbrooke's Hospital under the will of the late Mr. E. J. Mortlock.—Under the will of the late Mr. Albert Bousfield provision is made for legacies of £200 each to the London Hospital, the Middlesex Hospital, St. Mary's Hospital, the Great Northern Central Hospital, the Fulham Cancer Hospital, the City of London Lying-in Hospital, the Royal Eye Hospital, the Alexandra Hospital for Hip Disease, the Samaritan Free Hospital in Marylebone-road, and the Sussex County Hospital.—Miss Barbara Matthew Ross has by her will bequeathed to the National Industrial Home for Crippled Boys at Kensington, £400; to the Society for the Prevention of Cruelty to

Animals, £400; to the Royal Sea Bathing Infirmary at Margate, £200; to the Metropolitan Convalescent Institution, £200; to St. Mary's Hospital, £200; to the Samaritan Free Hospital for Women and Children in Marylebone-road, £200; and to the New Hospital for Women in Euston-road, £400.—Under the will of Mr. Jacob Uttley £100 are bequeathed to the Rotherham Hospital and the Royal Hospital and the Royal Infirmary and the School for the Blind, Sheffield, receive £100 each.

WALTON CONVALESCENT HOME.—The annual report of the Walton convalescent home near Clevedon states that 538 patients were admitted during 1902, being 60 more than the maximum of previous years. The financial statement showed that the income amounted to £983 and that a favourable balance of £8 remained.

SUCCESSFUL VACCINATION GRANT.—A notable record has been established by Mr. J. B. G. Gidley-Moore, M.R.C.P. Edin., L.R.C.P. Lond., of Ongar, Essex, who has been public vaccinator for the No. 1 District of the Ongar Union for 28 years and who during that period has always obtained the award under the provisions of Section 5 of the Vaccination Act, 1867.

HEALTH OF DEVIZES.—The annual report of the medical officer of health of Devizes states that the population numbered 6532 and that the birth-rate for the year 1902 was 22·6 per 1000. The death-rate for the same period was 11·7 per 1000. More than half of the deaths were of persons over 66 years of age and one of those deceased was over 100 years of age.

FALMOUTH SEWAGE.—At the meeting of the Falmouth town council held on Feb. 12th the mayor (Dr. W. Banks) moved:

That immediate steps be taken to carry out the undertaking of a sewage scheme as set forth in a resolution passed in April, 1902, or, failing this, to repay the loan of £1000 sanctioned on the understanding that the council would submit to the Local Government Board revised plans and estimates of a drainage scheme for the borough.

Eventually the motion was carried by 9 votes to 3.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Earlier Closing of Shops.

IN the House of Lords a Bill has been introduced by Lord RIBBLESDALE to enable local authorities to fix an hour for the closing of shops.

Sir Michael Foster's Position.

Intimation has been conveyed to the party whips that for the future Sir Michael Foster, Member for the University of London, will sit on the Opposition side of the House.

The Disciplinary Powers of the General Medical Council.

The Bill framed by the General Medical Council for strengthening its hands in dealing with penal cases is once more before the House of Commons. It was introduced on Feb. 23rd by Sir John Batty Tuke who has a double interest in the measure in respect of being a member of the Council and the Parliamentary representative of the Universities of Edinburgh and St. Andrews. The Bill has three main provisions. In the first place it gives the Council power to remove from the Medical Register for a limited period of time practitioners who have been convicted of crime or who have been adjudged by the Council to have been guilty of infamous conduct in a professional respect. In the present state of the law the Council can simply remove from the Register, and restoration is obtained by process of application. The second main provision of the Bill enables all medical licensing bodies summarily to deprive of his diploma or diplomas the practitioner who has been removed from the Register by the Council in respect of misconduct. Some of the bodies, but not all, possess this power already. The third main provision enacts that fines and penalties recovered under the Medical Acts shall be paid to the Council and applied in aid of the expenses of the Council in administering these Acts. The Bill is backed by Sir John Batty Tuke, Sir Richard Jebb, Dr. J. A. Campbell, Sir Michael Foster, Mr. Talbot, and Sir John Gorst. It has been read a first time and its second reading has been put down for April 24th, when there is little or no chance of its being reached in time for discussion. It is matter for regret that a measure of this kind, affecting as it does the efficient administration of important Acts of Parliament, should not have been taken charge of by the Government instead of being left in the hands of a private Member.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 18TH.

Housing of the Working Classes.

During the debate on the Address this subject was discussed at considerable length on an amendment proposed by Dr. MACNAMARA in which it was declared that the greatest hardships are inflicted upon many of the working-class population by reason of the lack of proper housing accommodation and that immediate parliamentary attention to this evil is one of the most pressing of the necessities of domestic policy. Complaint was made against the Local Government Board for remissness in connexion with the administration both of the Public Health Acts and the Housing Acts.—Mr. WALTER LONG, in reply, defended his department and said that too often when he attempted to bring pressure to bear on local authorities to induce them to discharge their duties more effectively and to appoint properly qualified officers it was the local Member of Parliament who came to him and protested that he was unduly severe. He frankly admitted that there was great need for effective administration in regard to sanitary matters, and he appealed to Members of Parliament to support the Local Government Board in its efforts in this direction. Mr. Long intimated that he proposed during the present session to introduce a Bill dealing with certain minor matters connected with the housing of the working classes, including the extension of the period for the repayment of loans.

THURSDAY, FEB. 19TH.

Boards of Guardians and their Officers.

Mr. MORRELL asked the President of the Local Government Board whether his attention had been called to the position in which boards of guardians were placed through want of control over the officers whose salaries and pensions the ratepayers were called upon to provide; and whether he would cause inquiry to be made into the matter with a view to the provision of a remedy.—Mr. LONG replied: I have received a resolution on this subject from the Woodstock board of guardians. Boards of guardians possess considerable powers of control over their officers and except in the case of their principal officers have the power of dismissal. As regards the principal officers the consent of the Local Government Board is required to dismissal, but where there is cause for dissatisfaction it is competent to the guardians to make representations to the board.

FRIDAY, FEB. 20TH.

Private Members' Bills Introduced.

A number of Bills were introduced by private Members and formally read a first time, amongst them being a Bill to amend the law relating to the qualification and tenure of medical officers of health and inspectors and to make further provision relating to superannuation allowances for such officers and inspectors, a Bill to provide for the registration of plumbers, and a Bill to provide that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians. No one of these three Bills has obtained a favourable place in the order paper for second reading.

MONDAY, FEB. 23RD.

General Laurie and the Medical Acts.

At this sitting General LAURIE introduced his two Bills to amend the Medical Acts so as to facilitate the registration in this country of colonial practitioners. Unfortunately for the progress of the measures neither of them has obtained a favourable place in the orders for second reading.

Lead Poisoning in the Pottery Trade.

Sir CHARLES DILKE asked the Home Secretary whether he could give the House any information as to the working of the compensation scheme instituted by the master potters for injuries caused by lead and alluded to in the arbitration on the Home Office rules; and whether His Majesty's Government had been informed by the Potters' Association of the progress of the scheme and of the extent to which masters and men had cooperated to make its advantages general.—Mr. AKERS-DOUGLAS replied: I am informed that 72 firms have joined the Potters' Assurance Association and that three others are insured on the same lines in other ways. Most of these firms are of importance in the trade, and, as far as my information goes, the scheme appears to be working satisfactorily with the exception that in eight factories, as I understand, the men have refused to submit to the medical examination which is an essential part of the scheme.

The Board of Education and Physical Training.

Dr. MACNAMARA asked the Secretary to the Board of Education whether he would consider the desirableness of replacing the recently issued model course of physical drill for children by a course more suited to the needs of young children than the present compilation which was prepared from the Soldiers' Drill Book.—Sir WILLIAM ANSON replied: The Board of Education has no present intention of replacing the model course of physical training. But it is considering the desirableness of issuing a kind of introduction to the model course, showing the steps by which the series of exercises in it may be progressively acquired. This will greatly assist the managers of the smaller schools in introducing it. I may remind the honourable Member that though the Board strongly advocates a uniformity of system, both in the interests of the teachers (on whom falls the burden of imparting the physical training) and in those of efficient instruction, it is prepared to consider (and has in many cases approved) alternative schemes having the same scope and aim as the model course.

TUESDAY, FEB. 24TH.

Ventilation of Cotton Factories.

Mr. SHACKLETON asked the Home Secretary whether he could state what number of employers were reported during the year 1902 by the inspector under the Cotton Cloths Factories Act as having exceeded the nine volumes of carbonic acid (carbon dioxide) in every 10,000 volumes of air (Factory and Workshop Act, 1901, Clause 94, section 3); and whether he could state the number of prosecutions which had been instituted by the Home Department in consequence of these reports.—Mr. AKERS-DOUGLAS replied: There were 63 cases in 1902 in which the inspector reported that an employer had exceeded the

standard referred to; but in many cases the excess was found only in one part of the shed while in other parts the proportion of carbonic acid was found to be below the prescribed limit. No proceedings were instituted on these reports. I do not think the inspectors are called upon to prosecute unless a contravention of the Act in this matter is continued or repeated after notice from the inspector.

Alcohol and Lunacy in Ireland.

Mr. JAMES O'CONNOR asked the Chief Secretary to the Lord Lieutenant of Ireland (1) if he had seen the report read by Dr. Norman Conolly at the recent meeting of the Richmond Asylum in which reference was made to the increase in the number of cases of alcoholic lunacy committed to that institution; (2) whether he was aware that the Richmond Asylum authorities had since the year 1900 made several representations to the Irish Government on this matter; and (3) whether, in view of the state of the law as regards the care of alcoholic lunatics and considering the revenue derived by the State from the sale of intoxicating liquor he would recommend the establishment of a State infirmary in Ireland for the treatment of persons who had become insane from excessive indulgence in intoxicating drinks.—Mr. WYNDHAM replied: The reply to the first and second queries is in the affirmative. The concluding part of the question suggests an amendment and widening of the existing law which provides for the establishment of institutions for the reception of habitual drunkards under certain prescribed conditions. I cannot give an undertaking such as is suggested.

Sanitary Condition of the House.

Mr. WYLIE asked the Member for North Hunts, as representing the First Commissioner of the Board of Works, when the report of the Select Committee appointed to inquire into the ventilation of the House of Commons building would be issued; and what steps, if any, had been taken during the recess to remove some of the insanitary conditions.—Mr. AILWYN FELLOWES said: The Select Committee found it impossible to conclude their inquiry last session and it is proposed to ask the House to re-appoint the committee at an early date. During the recess the authorised improvements in the ventilation of the Commons committee-rooms have been completed, and new fittings have been supplied to the sanitary offices on the ground-floor terrace front and mechanical ventilation has been introduced into them with excellent results. Other sanitary offices in the building will be dealt with in the same way as opportunities arise during recesses.

WEDNESDAY, FEB. 25TH.

Sewage Contamination of Shell-fish.

Sir JOSEPH DIMSDALE asked the President of the Local Government Board whether his attention had been called to a recent report of the medical officer of health for the City of London on shell-fish and sewage; and whether he would take any, and if so what, action in the matter.—Mr. WALTER LONG replied: Yes, sir, my attention has been called to this report. The Royal Commission on Sewage Disposal are taking evidence and making investigations on the subject of dangerous contamination of shell fish by sewage with a view to ascertaining the measures necessary for obviating risks to the public health from this cause. I have caused to be sent to the commission a copy of the report referred to and other reports relating to this matter.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, W.C.

Aids to Sanitary Science. For the use of Candidates for Public Health Qualifications. By Francis J. Allan, M.D. Edin., D.P.H. Camb, &c., Medical Officer of Health for the City of Westminster. Second edition, revised and edited by Reginald A. Farrar, M.A., M.D. Oxon., D.P.H. Camb., &c. Price, cloth, 4s. 6d.; paper, 4s.

The Errors of Accommodation and Refraction of the Eye, and their Treatment. A Handbook for Students. By Ernest Clarke, F.R.C.S. Eng., M.D., and B.S. Univ. Lond., Surgeon to the Central London Ophthalmic Hospital. Price 5s net.

The Practical Details of Cataract Extraction. By H. Herbert, F.R.C.S. Eng., Major, I.M.S., Professor of Ophthalmic Medicine and Surgery, Grant Medical College. Price 4s net.

CHURCHILL, J. & A., 7, Great Marlborough-street, W.

A System of Clinical Medicine dealing with the Diagnosis, Prognosis, and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D. Lond., Physician to the West End Hospital for Diseases of the Nervous System; Physician to St. John's Hospital for Diseases of the Skin, London. Volume i. Local Diseases and Microbic Disorders. Price 12s. 6d. net.

The Elements of Pathological Anatomy and Histology. For Students. By Walter Sydney Lazarus-Barlow, B.A., B.C., M.D. Camb., F.R.C.P. Lond., Pathologist and Lecturer on Pathology at the Westminster Hospital. Price 24s. net.

FISCHER, GUSTAV, Jena.

Das natürliche Schutzsystem der oberen Wege als Fremdkörpertheorie. Von Dr. med. W. Lumann, St. Petersburg. Price M. 1. (Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie, herausgegeben von Prof. Dr. Haug, München. Ergänzungsheft.)

Die Neuronenlehre und ihre Anhänger. Ein Betrag zur Lösung des Problems der Beziehungen zwischen Nervenzelle, Faser und Grau. Von Dr. Franz Nissl, A. O. Professor in Heidelburg. Price M. 12.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Lernen und Leisten. Rede zur Feier des Geburtstages des Kaisers und Königs in der Aula der thierärztlichen Hochschule zu Berlin gehalten am 27, Januar, 1903. Von Hermann Munk. Price Pf. 60.

NEW SYDENHAM SOCIETY (Agent: H. K. Lewis, 136, Gower-street, W.C.).

An Atlas of Illustrations of Clinical Medicine, Surgery and Pathology. Compiled for the New Sydenham Society. (A Continuation of the "Atlas of Pathology."). Fasciculus xv. (Double Number) or iii. and iv. of New Series. Xanthelasma and Xanthoma, with especial Reference to their Association with Functional and Organic Diseases of the Liver. Price, to non-members, £1 1s.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Surgical Anatomy. Vol. iii. Abdomen; Pelvic Cavity; Lymphatics of the Abdomen and Pelvis; Thorax; Lower Extremity. By John B. Deaver, M.D., Surgeon-in-chief to the German Hospital, Philadelphia. Price of the work complete in three volumes, £8 6s. net.

RUDEVAL, F. R. DE, 4, Rue Antoine Dubois, Paris, VIe.

Traitement de l'Avortement. Par le Dr. Moïse Misrachi, Médecin du Consulat de France à Salonique. Avec Préface de M. le Dr. J. A. Doléris. Price 6 francs.

Le Dogme du Secret Médical (Essai de Réfutation). Par le Dr. J. Th. Dupuy, de la Faculté de Médecine de Paris. Price 3 francs.

SMITH, ELDER AND CO., 15, Waterloo-place, S.W.

Gastric Ulcers. Their Surgical Treatment. Two papers republished from THE LANCET of June 8th, 1901, March 29th, and April 5th, 1902. By C. B. Keetley, F.R.C.S., Senior Surgeon to the West London Hospital. Price 2s. 6d.

Saint Bartholomew's Hospital Reports. Edited by Norman Moore, M.D., and D'Arcy Power, F.R.C.S. Vol. xxxviii. Price, to subscribers, 6s.; to non-subscribers, 8s. 6d.

WHITE, F. W., 26, Browning-road, Manor Park, E.

Briefhand, or Orthographic Shorthand. An Abbreviated System of Writing Words as Spelt. By Frederick William White. Price 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BARTON, G. A. B., M.D. Brux., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Anæsthetist to the Female Lock Hospital.

D'EWART, JOHN, M.R.C.S., L.R.C.P. Lond., has been appointed Third Resident Assistant Medical Officer to Crumpsall Workhouse, Manchester.

DICK, GEORGE, M.B., B.S. Edin., has been appointed Medical Officer of Health for the counties of Sutherland and Caithness.

ELLIS, F. M., has been appointed Medical Officer for the Black Torrington, Bradbury, and Cookbury Districts by the Holsworthy (Devon) Board of Guardians.

EMERY, W. D'ESTE, M.D., B.Sc. Lond., has been appointed Clinical Pathologist to King's College Hospital.

FERGUSON, R. BRUCE, M.A., M.D., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Seventh (New Southgate) District of the Barnet Union.

GRAYSON, F. D., M.R.C.S., has been appointed Medical Officer of Health for the Rural District of Rochford.

HUTCHINSON, HENRY, L.R.C.P.I., L.F.P.S. Glas., L.S.A. Lond., has been appointed Surgeon to the Metropolitan District Railway Provident Society for the Suburbs of East Ham, Upton, and Manor Park.

IRVINE, R. C., M.B., Ch.B. Edin., has been appointed Senior House Surgeon to the David Lewis Northern Hospital, Liverpool.

JOHNSON, J. A., M.B., Ch.B. Vict., has been appointed House Physician to the David Lewis Northern Hospital, Liverpool.

LINDSAY, CREIGHTON H., M.B., B.Ch. Edin., has been appointed Resident Surgeon at the Birmingham General Dispensary.

MURRAY, WILLIAM, M.D., C.M. Edin., has been appointed Medical Officer of Health for the Warmley (Gloucestershire) Rural District Council.

O'HARA, W. E., L.R.C.S. L.R.C.P. Edin., L.F.P. & S. Glasg., has been appointed Junior House Surgeon to the David Lewis Northern Hospital, Liverpool.

SIMPSON, M.B., C.M. Aberd., has been re-appointed Medical Officer of Health to the Towcester Rural District Council.

SPRIGGS, EDMUND IVENS, M.D. Lond., has been appointed Physician to the Out-patients' Department in the City of London Hospital for Diseases of the Chest.

TUKE THOMAS SEYMOUR, M.B., B.Ch. Oxon., M.R.C.S. Eng., has been appointed Lecturer on Insanity, St. George's Hospital, Hyde Park-corner.

WALKER TOM, M.R.C.S., L.R.C.P. Lond., has been appointed Second Resident Assistant Medical Officer to Crumpsall Workhouse, Manchester.

WATSON, C. GORDON, F.R.C.S. Eng., has been appointed Casualty Officer, Registrar, and Pathologist to the Metropolitan Hospital.

WOOD, C. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Second House Physician to the City of London Hospital for Diseases of the Chest.

WOOD, C. RAWDON, M.A., M.D., B.S. Durh., L.R.C.P., M.R.C.S., has been appointed Surgeon to the South-Western District of the National Fire Brigades Union.

WILLIAMS, PATRICK WATSON, M.D. Lond., M.R.C.S., has been appointed Lecturer on Practical Medicine at University College, Belfast.

YOUNG, EDWARD HERBERT, M.D. Durh., L.R.C.P., M.R.C.S., L.S.A., D.P.H. Lond., has been appointed Medical Officer of Health for Okehampton, Devon.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN CITY LUNATIC ASYLUM, Kingseat.—Medical Superintendent. Salary £400 per annum, rising to £600.

BOURNEMOUTH, ROYAL BOSCOMBE AND WESTS HANTS HOSPITAL.—House Surgeon. Salary £60 per annum, with board, lodging, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Physician and Surgeon. Salary £120 per year, with board, apartments, and laundress.

CUMBERLAND INFIRMARY, Carlisle.—Resident Medical Officer. Salary £80, rising to £100.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £130 per annum, rising to £220, with rooms, board, and attendance.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Two Physicians to Out-patients.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

LEEDS PUBLIC DISPENSARY.—Honorary Physician.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £120 per annum, with board and lodging.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Honorarium at rate of 50 guineas per annum, with board and residence.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, unmarried, for six months, eligible for election as Senior for another six months. Salary at rate of £80 and £100 a year respectively, with board and lodging.

MANCHESTER ROYAL INFIRMARY CONVALESCENT HOSPITAL, Cheadle.—Assistant Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board and residence.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—Assistant Physician. Also Casualty Officer for six months. Salary £80 with lunch.

POPLAR AND STEPNEY SICK ASYLUM Bromley, E.—Second Assistant Medical Officer. Salary £100 per annum, with rations, apartments, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Two Hunterian Professors.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Resident House Surgeon. Salary at rate of £50 per annum, with board and laundry. Also Assistant at Dispensary (non-resident) for six months. Salary at rate of £100 per annum.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon, for six months. Salary at rate of £70 per annum, with board and residence.

SEAMEN'S HOSPITAL ("DREADNOUGHT"), Greenwich, S.E.—House Surgeon. Salary £65 per annum. Also Junior Resident Medical Officer. Salary £40 per annum. Both with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary at rate of £120 per annum, with rooms, coal, gas, and attendance.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTH.

WARDE.—On Feb. 21st, at Lonsdale-gardens, Tunbridge Wells, the wife of Wilfrid Brougham Warde, M.D., M.R.C.P. Lond., of a son.

MARRIAGES.

DOBSON—MILLINGTON.—Feb. 24th, at the parish church, Davenham, Cheshire, by the Rev. J. J. James, M.A., Joseph Faulkner Dobson, M.S. (Lond.), F.R.C.S. (Eng.), eldest son of Joseph Dobson, M.D. (Lond.), of Burley, Leeds, to Minnie, youngest daughter of the late Thomas Millington of Hope, Flintshire.

GORDON-SMITH—NEWBERY.—On Feb. 18th, Harry Gordon-Smith, M.A., M.B. Cantab., to Amy Eileen, youngest daughter of Frederick Newbery of Milton-Ernest, Bedford.

MOORE—NOLAN.—On Feb. 11th, at Cairo, Egypt, Cecilia Eva Gladys de Radclyffe, eldest daughter of Beaufoi Moore, of the Middle Temple and Ashington, Essex, barrister-at-law, and of Mrs. Beaufoi Moore, to Harold Nolan, LL.B., M.B. Lond., F.I.C.

DEATH.

PEREGRINE.—On Feb. 18th, at the Firs, Woking, Thomas Peregrine, M.D. Edin., in his 93rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE NATIONAL ANTI-VIVISECTION HOSPITAL.

IN THE LANCET of June 14th, 1902, p. 1709, we referred to a circular concerning Hospital Sunday sent out by an association called the Church Anti-Vivisection League. The association in question recommended subscribers to allocate their subscriptions to a hospital which was just about to be opened. The hospital is now in working order and is called the National Anti-Vivisection Hospital. We referred in our former article to the staff of the hospital. It consisted of 26 members, some of whom lived in Cornwall, Gloucester, Oxford, and other places distant from London. From a circular which we have now received it appears that the staff is reduced to 11 members, ten of whom live in London and one in Greenhithe. Of the ten two are homœopaths. The senior member, Dr. Alexander Bowie, is credited in the Medical Directory with being the editor of "Harvey on the Circulation of the Blood" which seems to us to be inconsistent with being a pronounced anti-vivisectionist. But it is not the circular dealing with the hospital to which exception can be taken so much as an inordinately silly reprint from the *Verulam Review* entitled "A Visit to the National Anti-Vivisection Hospital." In this effusion we find platitudes such as the following: "The Laboratory (hateful name from its association with vivisectional experiments) is here called the Dispensary, and is daily supplying its medical aids." We never heard of a hospital dispensary being called anything but a dispensary, but after all a laboratory only means a place to work in. The paper before us reiterates the charge that "when the doctors of an hospital have allowed themselves habitually to perform painful experiments on animals the sick poor under their charge must always be in danger of similar experimentation at their hands." The paper implies that because the new hospital has no vivisector on its staff, no vivisection in its schools (so far as we know it has no school), and allows no experiments on patients, therefore its treatment is far better than that at any other hospital. In the "brief particulars of individual cases" we find the following one gravely set out:—

> A charwoman, dependent on her own earnings and afflicted with a partially paralyzed leg—think of this readers who have two good legs and nothing to do with them but to amuse yourselves with walks and rides and games—has been much helped, not only with strengthening medicine, but with a valuable surgical instrument. ..... She "blesses the hospital."

We cannot refrain from quoting a case in which the reasoning is somewhat similar:—

> Thomas Burton, has a wooden leg, used to wear second-hand wooden legs, and drink a glass of hot gin and water every night. Found the second-hand wooden legs split and rot very quickly, is firmly persuaded that their constitution was undermined by the gin and water. Buys new wooden legs now and drinks nothing but water and weak tea. The new legs last twice as long as the others used to do.—(Jonas Mudge, quoted in "Posthumous Papers of the Pickwick Club.")

But to be serious: Do the board of management, the medical staff, and the medical patrons of this hospital think that its cause will be advanced among thinking persons by the publication of such twaddle as we have quoted? Also are they prepared to use no treatment or means of cure which has been found out by means of experiments on animals? Dr. Bowie, who was interviewed by the writer of the paper before us, makes a great point of the successful treatment of wasting babies. We should like to ask him how he will treat a case of cretinism or of myxœdema? Will he prescribe thyroid gland? Will the surgeons of the hospital ever tie an artery in its continuity for aneurysm? If they do they will be profiting by experiments made upon animals. If they do not they will not be doing their best for their patients. We leave Dr. Bowie and the surgeons to get out of this dilemma in the best way that they can.

A COURSE OF READING.

To the Editors of THE LANCET.

SIRS,—Would you kindly suggest in the next issue of THE LANCET what you consider the most suitable text-books to read for the B.S. (University of London) examination (including the examination for honours)? Thanking you in anticipation,

I am, Sirs, yours faithfully,

Feb. 13th, 1903. BACHELOR.

*** The most suitable books for the B.S. (University of London) are: "The International Text-book of Surgery," by Gould and Warren, and Treves's "Operations of Surgery." The ordinary works on anatomy should be studied and, in addition, Treves's "Surgical Anatomy." It is always well for a candidate for honours at the B.S. examination to read special works, such as Sheild's "Diseases of the Breast," Treves's "Intestinal Obstruction," Butlin's "Diseases of the Tongue," Bland-Sutton's "Tumours," and so on. This advice is given with the limitations which our correspondent will find in our leading article on p. 598; while the advice of his lecturers might also be sought with advantage.—ED. L.

EMPLASTRUM BELLADONNÆ.

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to a letter from one of your correspondents relative to emplastrum belladonæ. We have made this plaster at our Warwick works for over 30 years and may safely say that such a complaint as "blistering" by this plaster has never reached us. During the whole of our experience we have only had two or three complaints at the outside of our belladona plaster "irritating." It is ten years ago since we even had those.

The component parts of the plaster should be so blended that even irritation should be next to impossible, but on very highly sensitive skins slight irritation may occur, causing redness but certainly not blistering.

I am, Sirs, yours faithfully,

For LESLIES, LIMITED,

J. S. CHRISTIE-RENNECK, Managing Director.

London, Feb. 17th, 1903.

UNFOUNDED ACCUSATION AGAINST A MEDICAL MAN.

ON Feb. 17th and 18th Mr. Justice Jelf and a special jury heard the case of *Pride v.* Mellish, in which George Frederick Pride, a farmer of Tetbury, sued John Stafford Mellish, M.R.C.S. Eng., L.R.C.P. Lond., for assault. The assault was not denied but was justified on the ground that the plaintiff was behaving in an unseemly manner. The plaintiff went to the defendant's house as he was courting the parlourmaid. The defendant finding him in the house put him out into the road and horsewhipped him. The parlourmaid who was called for the plaintiff made an accusation against Mr. Mellish in the course of her evidence, but she admitted that she had said nothing at the time of the alleged offence. Mr. Justice Jelf pointed out that no man had any right to take the law into his own hands. There were, however, horsewhippings and horsewhippings. The jury must do their duty according to law, but after they had done this they were at liberty to show that the plaintiff had only received a richly deserved castigation. The jury found a verdict for the plaintiff with one farthing damages. The defendant paid 1*s.* into court and was awarded judgment with costs. The judge, in conclusion, said that an unfair aspersion had been needlessly made upon the defendant in the course of the trial. Such an attack was especially likely to damage a medical man, but it had utterly failed. Mr. Mellish's reputation was untouched. It was quite right that there should have been a special jury and he certified accordingly. We congratulate Mr. Mellish upon the happy ending to this case. An accusation such as was made against him, though such accusation was not the point of the case, is easy to make and hard to refute, and it is well to have had the matter so thoroughly inquired into in a public court.

MEDICAL TESTIMONIALS TO QUACKERY.

In *Pearson's Magazine* for February, 1903, appears an advertisement of a quack preparation known as bile beans. Its harmlessness and usefulness are guaranteed by two testimonials purporting to come from medical men. One is dated from 65, Regent-street, London, W., and is signed J. H. Hart, L.R.C.P. and L.R.C.S. We cannot find Mr J. H. Hart's name in the Medical Register, and although he alleges that he has examined samples of bile beans and certifies that they are composed of selected high-class preparations we do not think that his qualifications are those of a skilled analytical chemist and, moreover, 65, Regent-street, is a confectioner's shop. The other testimonial is datest from 9, Guildford-street, Russell-square, and is signed C. H. Bennett, L.R.C.P. and L.R.C.S. The name C. H. Bennett, with the qualifications of L.R.C.P., L.R.C.S. Edin., appears in the Medical Directory as that of a practitioner living in the provinces whose address is uncommunicated. No. 9, Guildford-street, is, according to the Post Office Directory, a lodging-house, and as regards Mr. Bennett's analysis we can only repeat what we have already said about that of Mr. Hart. We think that the attention of the General Medical Council might well be called to the act of these two members of the profession. We would further intimate to the proprietors of popular magazines that they are taking dirty money by inserting the numerous advertisements which they do insert emanating from quacks.

A WARNING.

To the Editors of THE LANCET.

SIRS,—On Feb. 19th a German representing himself as a Dr. Osten, an M.D. of Berlin and now a student at the London Hospital, presented himself at the North-West London Hospital, professing to be interested in medical work. In accordance with continental etiquette I gave him my card. The same evening he called at my private residence and, after fully apologising for his untimely visit on so short acquaintance, wished to borrow some ready cash. I explained that I never lent money, but was willing to make him a small gift, which I did. I have since heard that when this so-called Doctor left the hospital property belonging to the house surgeon left it too. I feel it my duty to warn the profession against this individual as I fear he may make use of my card as an introduction.

I am, Sirs, yours faithfully,

W. KNOWSLEY SIBLEY, M.D. Cantab.

Duke-street Mansions, W., Feb. 23rd, 1903.

*** The Warden of the London Hospital Medical College informs us that there is no such person as Dr. Osten connected with the London Hospital or Medical College. A person describing himself as Dr. Osten has had some letters addressed to the London Hospital, but the Warden having heard that "Dr. Osten" was obtaining money under false pretences informed the police of the matter. Since then nothing has been seen within the hospital of "Dr. Osten."—ED. L

Young Practitioner.—To use a nurse as an unqualified assistant is a professional offence. If such conduct can be proved against a practitioner the General Medical Council should certainly order him to desist or to run the risk of losing his place on the Register. It would be a more difficult task to convict a medical man of having an agreement with a parish nurse and we are loth to believe in these irregular bonds between practitioners and nurses.

Candid Jane.—The "eminent doctors" who discuss, or who are said to have discussed, these topics with ill-informed paragraph writers are not, as a rule, people of any standing in the medical profession and are frequently not medical men at all. The specific instances bear the trace of pure invention, while the writer's own contribution to scientific knowledge shows complete ignorance of anatomy, physiology, and medical procedure.

A. S. W.—Many methods have been employed for the removal of tattoo marks but very few of them are of value. The three chief methods are: 1. Cauterisation of the part or scarification leading to the formation of a scar. 2. Excision, the edges of the wound being brought together; this is possible only for small areas and where the skin is loose. 3. Excision followed by Thiersch grafting.

X.—We do not know any place where such forms are kept, but any solicitor, if the conditions are explained to him, ought to be able to embody them in an agreement.

Yorks.—Our correspondent is advised to communicate with the secretary of the Pharmaceutical Society of Great Britain, 17, Bloomsbury-square, London, W.C.

F. W. L.—We do not know the name of any insurance company making the provision mentioned. "Lloyds" are said to take these risks.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1a30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (7th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (2nd).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M. Dr. H. Radcliffe Crocker: The Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. Lecture II.—General Modifying Conditions. (Lettsomian Lecture.)

TUESDAY (3rd).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Dr. Herringham and Dr. Hurtley: On the Excretion of Alkalies in Certain Conditions of Renal Disease.—Mr. H. W. Armit: On Ehrlich's Dimethyl (p) Amido benzaldehyde Reaction.—Dr. O. K. Williamson; On the Relation existing between Uric Acid Excretion and the Breaking Down of White Blood Corpuscles.

WEDNESDAY (4th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Blacker, Dr. H. Roberts, Dr. Lewers, Dr. Tate, Dr. A. Routh, Dr. Handfield-Jones, and Mr. Bland-Sutton. Inaugural Address:—Dr. Malins (President): Some Aspects of the Economic and of the Antenatal Waste of Life in Nature and Civilisation.

THURSDAY (5th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms Fitchborne-street, Edgware-road, W.).—8.30 P.M. Papers:—Mr. P. L. Mummery: The Value of Arthrotomy in the Treatment of Certain Joint Lesions.—Dr. Sidney Phillips.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. Paper:—Dr. F. J. Tresilian: Some of the Vagaries of Syphilis.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. F. H. Glew: Spark Phenomena.

FRIDAY (6th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Cases will be shown by Dr. M. Dockrell, Mr. C. Ryall, Dr. F. S. Toogood, Mr. C. Williams, and Dr. R. E. Scholfield.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. A. V. Harcourt: New Chloroform Regulating Inhaler by which the Percentage of Chloroform in the Vapour Inhaled can be Positively Controlled. (The instrument will be shown.)

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases, Specimens, and Instruments will be shown by Mr. F. J. Steward, Mr. C. Baber, Dr. Tilley, Dr. Kelson, Dr. Bronner, and others.

SATURDAY (7th).—MEDICAL SOCIETY OF LONDON (Whitehall Rooms, Hotel Metropole).—7.30 P.M. 150th Anniversary Dinner.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (2nd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. Keith: A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to Man with a view of elucidating the condition usually described as "Glenard's Disease."

MEDICAL (GRADUATES') COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. Fox: Clinique. (Skin.) 5.15 P.M. Dr. P. H. Pye-Smith: Albuminuria.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Lloyd: Anæsthetics in Cases of Empyema, &c.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. General Monthly Meeting.

TUESDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. O. Hawthorne: Clinique. (Medical.) 5.15 P.M. Mr. E. Clarke: Defects of Refraction.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Moullin: Posterior Displacement of the Uterus.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. W. D. Halliburton: On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Buzzard: On Cases in the Wards.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Sir. W. Abney: Recent Advances in Photographic Science.

WEDNESDAY (4th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. Keith: A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to man with a view of elucidating the condition usually described as "Glenard's Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Smith: Clinique. (Surgical.) 5.15 P.M. Mr. A. Carless: The Systematic Examination of Joints in Disease and Injury.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis and Treatment of Valvular Disease of the Heart.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Acland: Pneumothorax.

THURSDAY (5th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. H. T. Bulstrode: The Causes, Prevalence, and Control of Tuberculosis. (Milroy Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. W. H. A. Jacobson: Clinique. (Surgical.) 5.15 P.M. Dr. G. H. Savage: Insanity of Decay.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Edwards: Rectal Stenosis.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. T. G. Brodie: On the Circulation. (Lecture on Advanced Physiology.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. F. E. Batten: Deformities of the Chest in Children.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Course.)

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Prof. L. C. Miall: Insect Contrivances.

FRIDAY (6th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. Keith: A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to Man with a view of elucidating the condition usually described as "Glenard's Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. J. Horne: Clinique. (Throat.) 5.15 P.M. Mr. H. L. Barnard: Acute Appendicitis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. Jones: General Paralysis of the Insane and the Legal Aspects of Insanity.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. A. D. Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology).

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street, W.).—9 P.M. Dr. J. G. McKendrick: Studies in Experimental Phonetics.

SATURDAY (7th).—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M. Right Hon. Lord Rayleigh: Light, its Origin and Nature.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1902, which was completed with the issue of Dec. 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 26th, 1903.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 20	30·34	W.	...	89	60	44	50	52	Hazy
,, 21	30·08	S.W.	...	68	58	52	52	54	Cloudy
,, 22	30·10	S.W.	...	57	55	54	53	55	Overcast
,, 23	29·69	S.W.	0·11	77	56	45	44	46	Overcast
,, 24	29·95	S.W.	0·01	66	50	36	41	43	Fine
,, 25	29·78	S.W.	0·19	89	54	43	43	46	Fine
,, 26	29·63	S.W.	0·09	82	45	44	42	45	Cloudy

During the week marked copies of the following newspapers have been received: *Surrey Advertiser, Reading Mercury, Local Government Journal, Daily Chronicle, The Register, Surrey Comet, Aberdeen Free Press (Weekly), Leisure Hour, Literary Digest (New York), Scientific American, Popular Science Monthly, Sheffield Daily Independent, Westminster Gazette, Plymouth Mercury, Aldershot News, Army and Navy Gazette, Echo, Daily Mail, Yorkshire Post, Dublin Express, Local Government Chronicle, Sussex Daily News, Morning Post, Hertfordshire Mercury, Birmingham Post, Sanitary Record, Daily Graphic, The People, &c.*

Communications, Letters, &c., have been received from—

A.—After-care Association for Poor Persons Discharged Recovered from Asylums for the Insane, Lond., Secretary of; Aberdeen City District Lunacy Board, Clerk of; Argus Printing and Publishing Co., Lond.; Mr. A. Arbenz, Birmingham; Messrs. Armour and Co., Lond.; Messrs. Arnold and Sons, Lond., Messrs. Ayrton and Saunders, Liverpool; A Country Practitioner.

B.—Mr. W. F. Brock, Swansea; Dr. R. M. Buchanan, Glasgow; J. W. Benson, Ltd., Lond.; Dr. John Brownlee, Glasgow; Mr. A. H. Buck, Brighton; Messrs. Brown and Pank, Lond.; Mr. J. Paul Bush, Clifton; Dr. Charles Buttar, Lond.; Sir C. B. Ball, Dublin; Messrs. J. Bright and Co., Sheffield; Mr. C. L. Bedford, Birmingham; Mr. C. Bullmore, Falmouth.

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H.—Mr. F. Holman, Ipswich; Dr. D. M Hutton, Birkdale; Mr. Archibald E. Hills, Lond.; Rev. J. Hetherington, Hull; Hospitals Association, Hon. Secretary of; Hastings, Medical Officer of Health of; Messrs. Hatch, Mansfield, and Co., Lond.; Mrs. N. H. Hubert, Billingshurst; Messrs. Hunt, Roope, Teage, and Co., Lond.

I.—I. M. J.; I. B.

J.—Dr. J. Johnston, Bolton; J. E. P.; *Journal de Physiothérapie*, Paris, Editor of; J. A.

K.—Dr. E. Klein, Lond.; Major C. R. Kilkelly, Caterham; Captain F. Kiddle, R.A.M.C., Lond.; Messrs. R. A. Knight and Co., Lond.; Dr. Knott, Dublin.

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N.—Dr. E. Norton, Folkestone; Dr. C. R. Niven, Liverpool; Dr. David Newman, Glasgow; Commissioner A. M. Nicol, Lond.; Nurses' Co-operation; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.

O.—Obstetrical Society of London, Secretary of.

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Y.—Yorks; Yarrow Convalescent Home, Lond., Secretary of.

Z.—Dr. Theodor Zangger, Zurich.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. L. Allen, Chichester; Mr. W. H. Allen, Hurst Hill; Messrs. Allen and Hanburys, Lond.; A. J. R. O.; A. D.

B.—Dr. E. T. Born, Greenfield; Messrs. Brown, Gould, and Co., Lond.; Dr. G. Byres, Lond.; Dr. J. C. S. Burkitt, Whitwick; Birkenhead Children's Hospital, Treasurer of; Mr. A. B. Batley, Leyton; Mr. S. H. Byam, Lond.; Mr. T. H. Brocklehurst, Templecombe; B. M., Hedenham; Buntingford House Retreat, Medical Superintendent of; Mr. A. Boyd, J.P., Glasgow; Dr. R. R. P. S. Bowker, Abertillery; Dr. F. T. Bibby, Fisherton, Ontario.

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N.—Mr. B. Narain, Edinburgh.

O.—Messrs. Overbury and Steward, Norwich; Ontario Publishing Co., Toronto, Canada.

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